

# Handbook



## Depot Level Maintenance Program

**HQMC DC, I&L**



**HQMC DC, P&R**



**MARCORLOGBASES**



**MARCORSYSCOM**

## Preface

This Depot Level Maintenance Program (DLMP) Handbook provides the information necessary to understand the DLMP requirements determination process and identifies at the end of each chapter each organization's responsibilities. When each part of the DLMP is done correctly, establishing accurate requirements, sourcing those requirements to the correct depot for repair, programming the required dollars through the Planning, Programming and Budgeting System (PPBS) budgeting our needs and reporting our results, then and only then have we begun to meet our workload requirements.

This handbook has been developed to address the major issues involved with the DLMP and the attendant PPBS. We have provided the users a list of depot level maintenance directives and publications that can be used to assist the action officers with a ready reference library. Most of the directives and publications cited in this handbook are accessible through the various websites DoD wide.

In a continuing effort to reduce the cost of doing business and to accurately identify depot maintenance requirements, a more objective and formalized DLMP requirements determination process was established in FY 1997. The critical improvements to the DLMP process have been the inclusion of the warfighters, program managers, resource managers and requirements determinators that allows for the analysis and review of buy versus repair tradeoffs and the optimal phasing plan to maintain readiness. This process prioritizes and optimizes requirements based on warfighting capabilities and balances depot maintenance requirements against life cycle management functions. Responsibility and accountability have been assigned to specific and appropriate organizations. All logistics communities were integrated to provide a greater and more comprehensive analysis of the entire process. This approach ensures that the requirements are truly needed by the warfighter. This visibility and open dialogue between communities has instilled confidence in the results that are produced from the entire requirements determination process. This process aligns depot maintenance requirements with the planning guidance and the warfighting capabilities to fight in the 21st century.

A working management structure is in place to provide policies and standardized procedures needed to keep pace with changing requirements. This process will also continue to incorporate new business practices to ensure they are supporting the operating forces in an effective and efficient manner.

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## **I. INTRODUCTION**

### **1.0 Organization of the Handbook**

The Handbook is organized into eight chapters plus appendices.

Chapter I, *Introduction*, provides a general introduction to identify areas of responsibility by Command, an overview of the Depot Level Maintenance Program (DLMP) and the Planning, Programming and Budgeting System (PPBS) process.

Chapter II, *Depot Level Maintenance Program (DLMP) Requirements Determination Process*, provides an overview of the process.

Chapter III, *Depot Source of Repair (DSOR)*, provides an overview of the process.

Chapter IV, *Program Objective Memorandum (POM)*, describes the process for Appropriated Funds.

Chapter V, *Budget – Appropriated Funds*, provides an overview of the process.

Chapter VI, *Budget – Navy Working Capital Funds (NWCF)*, provides an overview of the process.

Chapter VII, *Budget Execution* describes the process for executing appropriated funds.

Chapter VIII, *Budget Execution* describes the process for executing the navy working capital fund (NWCF) for the Depot Maintenance Activity Group (DMAG).

Chapter IX, *Policy*, describes the current policies pertaining to the treatment of DLMP.

Chapter X, *Summary and Conclusion*, summarizes the main points contained in the Handbook.

The *Appendices* provide a listing of acronyms, sources and various depot maintenance reporting procedures.

### **1.1 Purpose, Objective, and Scope of the Handbook**

(a) Purpose. The purpose of this Handbook is to acquaint Marine Corps action officers and Department of Defense (DoD) executives and managers with the concepts and procedures of the Depot Maintenance Program as it relates to the Planning Programming and Budgeting System (PPBS) process.

(b) Objective. The primary objective of this Handbook is to provide the reader with a better understanding of the DLMP in a life cycle and resource management environment. The Handbook is intended as a general reference for the Marine Corps work force at all levels. It discusses how depot maintenance requirements are determined and justified through the POM and budget cycles.

(c) This Handbook will provide the reader with a better understanding of the Depot Maintenance Program to include the financial structure and the requirements for operating in a customer-oriented and integrated resource management environment. The Marine Corps Materiel Command provides a single, cohesive voice while ensuring that all depot maintenance requirements and resources are integrated and balanced.

This Handbook is sponsored by the Marine Corps Materiel Command and will be updated as changes in policy and guidance dictate. It is applicable to the Marine Corps Materiel Command (MARCORMATCOM), Marine Corps Systems Command (MARCORSYSCOM, and Marine Corps Logistics Bases (MCLBs).

Proposed changes to this handbook will be submitted to COMMARCORMATCOM (Code M412) Attn: Director, Future Operations.

## **1.2 General Administration**

The DLMP stakeholders are: Deputy Commandant, Installations and Logistics (DC, I &L); DC, Programs and Resources (DC, P&R); Commander Marine Corps Materiel Command (COMMARCORMATCOM), and the Operating Forces both active and reserves. All stakeholders participate in the decision making process for determining funded, unfunded, and prioritization of requirements. In addition to their responsibilities as stakeholders, these organizations have additional responsibilities as listed below:

- DC, I &L:
  - Provides policy and advocacy on all aspects of the DLMP including PPBS
  - As a stakeholder in the DLMP requirements determination process assigns warfighting values to capabilities and/or weapon systems.
- DC, P&R:
  - Serves as the Operation and Maintenance, Marine Corps appropriation sponsor.
  - Provides PPBS policy and procedures.
- MARCORMATCOM is responsible for management and execution of the DLMP.
  - Owner of the DLMP requirements determination process
  - Receives external inquiries and coordinate with MARCORLOGBASES and MARCORSYSCOM as necessary.
  - Provides amplifying guidance on policies and regulations when required to MARCORLOGBASES and MARCORSYSCOM.
  - Ensures compliance with established policies and regulations including Depot Source of Repair (DSOR).
  - Serve as the Marine Corps point of contact for DC, I &L for depot maintenance POM and budget issues (O&MMC/O&MMCR, and NWCF -DMAG)
  - MARCORLOGBASES
    - Responsible for determining funded and unfunded depot maintenance requirements.

- Is a stakeholder in the DLMP and acts as MARCORMATCOM's agent for the DLMP Requirements Determination Process for all Marine Corps requirements no matter where they are sourced (i.e., organic, Depot Maintenance Interservice Support Agreement (DMI SA), and commercial).
  - Participates in the DLSOR process and conducts the DSOR assignment and implementation.
  - Responsible for Supply Chain Management (SCM) as it applies to DLMP.
  - Responsible for reporting program status (cost, schedule and performance) to HQ, MATCOM.
  - Responsible for determining MC Depot Maintenance Centers workload capability
  - Responsible for identifying program execution problems and recommends solutions to HQ, MATCOM.
- MARCORSYSCOM is a stakeholder in the DLMP. PMs are responsible for total life cycle cost, support and readiness of assigned equipment. This includes but is not limited to acquisition schedules, maintenance planning, equipment sustainment, phase-out plans (retirement plans), fielding plans, and replacement cost of item. PMs are prime participants in the DLSOR process.
- Marine Forces, active and reserve, are responsible for identifying and validating MEF and Reserve depot maintenance requirements.
- Commanders Bases, Posts and Stations will identify and validate depot maintenance requirements for Base, Post and Station T/E allowances.
- Defense Finance and Accounting is responsible for the Navy Working Capital Fund - Depot Maintenance Activity Group (NWCF -DMAG) Accounting Report (1307) and the Chief Financial Officer (CFO) Report.

### **1.3 Marine Corps Depot Level Maintenance Program (DLMP)**

The Materiel Capability Decision Support System (MCDSS) is a data warehouse that produces the Principal End Item (PEI) Stratification sheets which provides a bird's eye view of equipment requirements balanced against on-hand assets and provides the status, location, and posture of Marine Corps PEI's. The PEI Stratification sheets begin the Depot Level Maintenance Program (DLMP) requirements determination process. Currently, the scope of the PEI Stratification sheets PEIs only, this is under review and Secondary Reparables (SecReps) will be included by a date yet to be determined. At this time SecReps will be manually inserted into the DLMP requirements process. Once DLMP requirements are identified by Marine Corps Program Code (MCPC), the Dynamic Equipment Repair Optimization Model (DERO) is used to initially programs limited depot repair dollars in the POM process and balance optimal equipment readiness across the Marine Corps.

The DLMP consists of three essential functions. First, it identifies and validates the workload through the requirements determination process. Secondly, it identifies who can perform the maintenance on the requirements. Thirdly, it provides a program execution framework in order to report status and identify cost, schedule and performance problems to HQ prior to crisis.



*Workload requirements* are discussed in detail in Chapter II of this Handbook. *Workload performance* consists of executing the approved/funded requirements discussed in Chapter VII of this handbook.

#### 1.4 Planning Programming and Budgeting System (PPBS) Overview

Figure 1-1 below summarizes the Planning Programming and Budgeting Systems (PPBS) process for the DLMP. The remaining chapters in this handbook walk through each step of the process beginning with development of DLMP requirements to executing the DLMP program.

#### **DEPOT LEVEL MAINTENANCE PROGRAM (DLMP)**

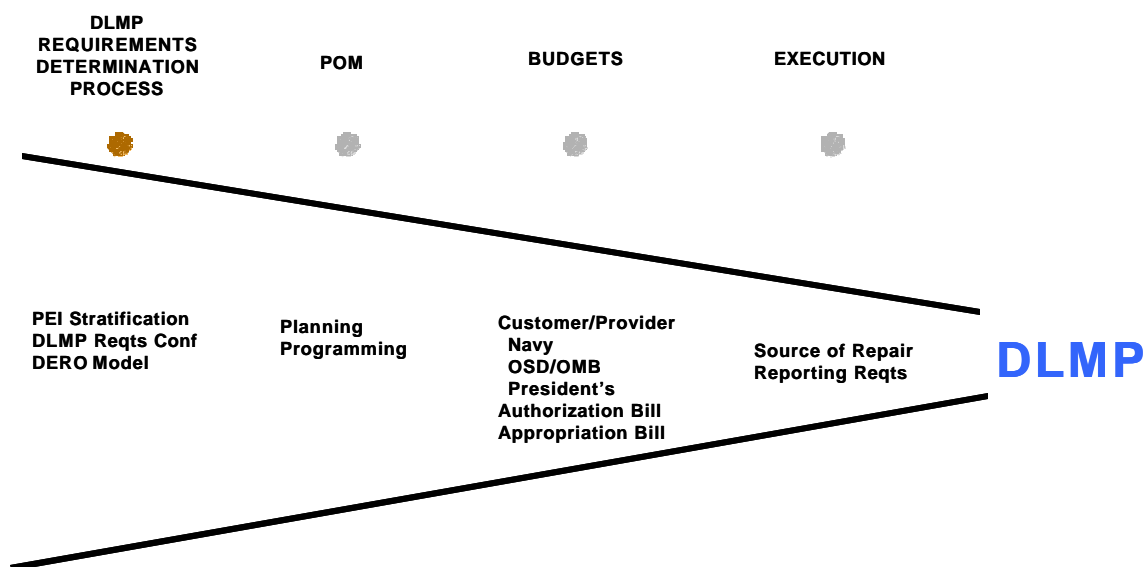


Figure 1-1

The Navy Working Capital Fund (NWCF) financial structure has multiple divisions identified by Component (e.g., Marine Corps) and business area (e.g., maintenance, transportation, commissaries, etc.). The business areas operate like commercial businesses by selling goods and services to DoD's operating forces and other business areas (customers). Customer orders (funded requests for goods and services) provide the budgetary resources to finance defense business operations. Customers fund their requests primarily with appropriated resources (Operation and Maintenance, Procurement, and Research, Development, Test and Evaluation). Income derived from the sale of goods and services is then used to finance the NWCF activity groups continuing operations without fiscal year limitations. Unlike profit-oriented commercial businesses, NWCF businesses strive to break even in prices charged to customers. Revenue from customers sustains the full cost and the continuous cycle of NWCF business operations. For purposes of this handbook, the NWCF business area is the Depot Maintenance Activity Group (DMAG).

The PPBS process is continuous and overlapping. As reflected in Figure 1-2 below, at any one time, Components will be engaged in reporting budget execution for the current fiscal year while formulating budgets for the following year and planning/programming for future years.

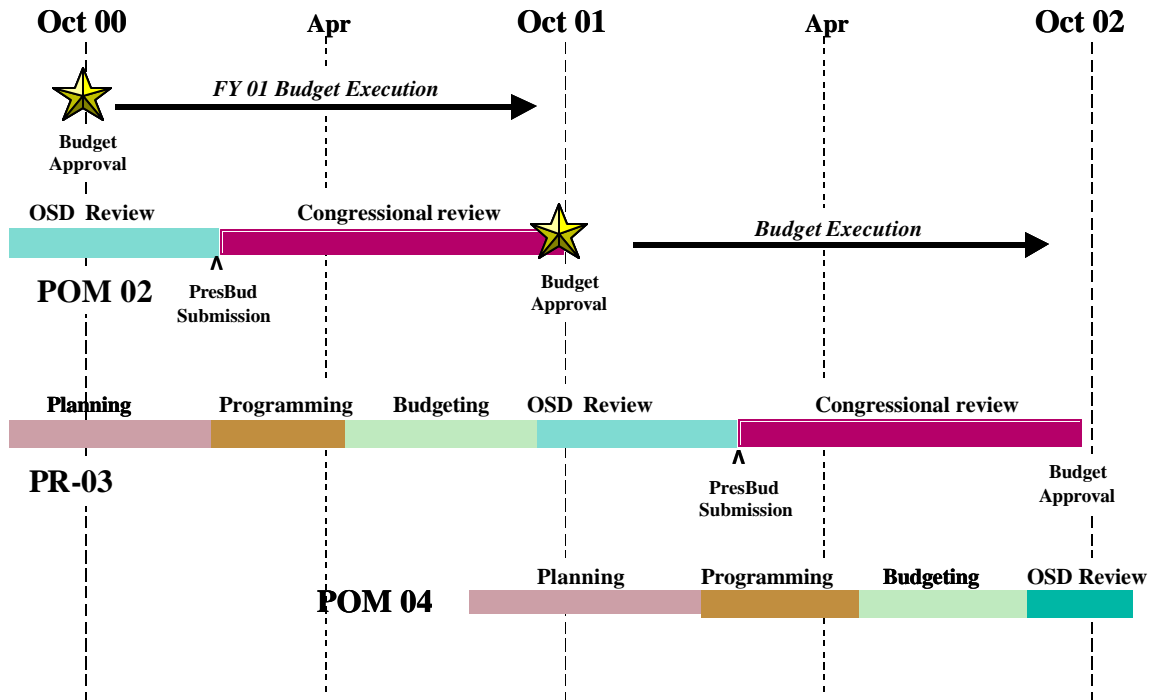


Figure 1-2

## **II. DEPOT LEVEL MAINTENANCE PROGRAM (DLMP) REQUIREMENTS DETERMINATION PROCESS**

### **2.0 Introduction**

The Depot Level Maintenance Program involves the Principal End Item (PEI) stratification process, requirements determination process, and the Dynamic Equipment Repair Optimization Model (DERO), MCPC specification and cost, schedule and performance reporting. This chapter includes specific responsibilities and timelines.

### **2.1 Principal End Item (PEI) Stratification Process**

The PEI Stratification process begins the requirements determination effort by collecting data from the Marine Corps boss files and displaying it in a manner that relates assets to requirements in a prioritized sequence, thus depicting what action needs to be taken to support the weapon systems. Boss files include various automated data sources such as the Logistics Management Information System (LMIS), Stock Control System (SCS), and Marine Corps Ground Equipment Resource Reporting (MCGERR). The PEI Stratification is a tool provided to allow greater visibility of the location, condition, and posture of our PEIs. PEI stratification is performed on all depot reparable candidates that are Class VII Allowance Type Items. The Stratification only uses the current FY portion of the LMIS Equipment Allowance File and pulls all allowances for current year plus through the FYDP. This is considered in the AAO for the purposes of PEI Stratification. These approved allowance requirements are in support of Maritime Prepositioning Ships (MPS), Marine Expeditionary Forces (MEF), Special Mission Forces, Reserves, Enhanced Equipment Allowance Pool (EEAP), Reserves, DMFA, Norway, General Support Forces, War Reserves and Mobilization. The stratification process attempts to satisfy all approved allowances by applying the total Marine Corps inventory; out-of-stores assets, in-stores assets, and loans for each weapon system to those allowances. The condition of the inventory assets being applied dictate actions necessary to satisfy the Table of Equipment (T/E) requirement. The Depot Level Maintenance requirements are determined by considering several factors.

- (1) Unserviceable assets held in-stores;
- (2) PEI stratification projection of future unserviceable items using nine-quarters of unserviceable return history;
- (3) PM established rotational program;
- (4) PM scheduled rebuilds and mid-life overhauls
- (5) Depot level Service Life Extension Programs (SLEP)
- (6) Scheduled depot level maintenance.

A Depot Maintenance Float Allowance (DMFA) supports the DLMP. The DMFA provides a quantity of mission essential, maintenance significant equipment that is available in stores that

allows for exchange with out-of-stores deadline equipment without detracting from a unit's readiness condition and assigned mission capabilities. The DMFA has an assigned T/E and is reported in LMI S as part of the AAO. The DMFA is developed, and calculated, by the MCCDC from data provided by MARCORMATCOM. MCO P4490.1A (draft) refers.

The AAO is the driver of the DLMP process. It is developed to a) satisfy the mission need b) support the concept of employment and c) meet the capability defined in the Mission Needs Statement (MNS). The War Reserve Materiel Requirements (WRMR is calculated per MCO P4490.1A draft (enclosure 2). Both the DMFA and WRMR are computed early in the system acquisition cycle. They are both components of the AAO. An annual recomputation of WRMR is accomplished for fielded systems per MCO P4400.39. This recomputation is not currently integrated into the DLMP process.

### **2.1.1 Responsibilities**

#### **a. Commander, Marine Corps Materiel Command, Headquarters**

(1) Responsible to provide guidance to LOGBASES relative to the performance and content of the DLMP requirements conference.

(2) Responsible to provide a framework for reporting cost, schedule and performance of the approved DLMP requirements.

(3) Responsible for the strategic direction of the DLMP and holds Marine Corps Systems Command (MATCOM) and Marine Corps Logistics Bases (MATCOM) accountable for the results.

#### **b. Commander, Marine Corps Logistics Bases, MATCOM**

(1) DMFA requirements are received from MARCORMATCOM in order to incorporate the requirements into Materiel Capability Decision Support System (MCDSS).

(2) Provides the PEI Stratification sheets to all stakeholders in the DLMP Requirements Determination Process.

(3) Co-Chairs the DLMP Requirements conferences with MARCORSYSCOM.

(4) Manages and executes the DLMP Program.

(5) Reports cost, schedule and performance of the DLMP to HQ, MATCOM

(6) Using the DERO decision tool, calculates the first cut at funded and unfunded requirements. Applies the human factor to the DERO results to provide a sanity check and that the selected requirements are executable by the sources of repair.

c. Commander, Marine Corps Systems Command

(1) Reviews/validates the DLMP requirements list provided by MARCORLOGBASES.

(2) Validates the following data elements on the PEI Stratification sheet:

- Source: 1. EAF/TLF - Allowance from LMIS
- Source: 4 & 5. Stores Not Ready For Issue Funded/ Unfunded
- Replacement Cost
- Not Ready For Issue Funded Loans
- Not Ready For Issue Due (RA)
- Not Ready For Issue Funded Due (SYSCOM)
  
- Source: Planned Allowance

(3) Validates the DMFA requirements in LMIS .

(4) Co-Chairs the DLMP Requirements conferences with MARCORLOGBASES.

(5) PMs establish and publish the maintenance concept and plans for the assigned equipment. This includes scheduled rebuilds, overhauls, PIPs, IROANs, etc.

## **2.2 DLMP Requirements Determination Process**

This section describes the DLMP's goals and objectives, the background and structure of the DLMP requirements determination process, and finally, how funding is determined based on the requirement process.

The depot level maintenance requirements determination process is a formalized process that involves the Operating Forces, acquisition, logistics, and financial communities. This section discusses in detail how depot maintenance requirements are determined and justified through the Planning, Programming and Budgeting System (PPBS).

MARCORLOGBASES has implemented an effective, fully integrated DLMP Requirements Determination Process for Class VII ground weapons and equipment. This process altered the way the Marine Corps had acquired and managed its resources for the depot maintenance program under the Planning, Programming, and Budgeting System. The DLMP process ensures ready, capable, equipment is provided and sustained to meet Marine forces needs. Prior to fiscal year (FY) 90, the Marine Corps maintained adequate rotational stocks of Class VII assets in order to satisfy operational requirements of the Marine forces and maintain depot skills and capability. However, due to shrinking financial resources and competing priorities, the depot maintenance program required increased scrutiny of requirements. The Marine Corps DLMP requirements determination process was studied to develop alternatives, institutionalize and modify improvements, and examine

other models and business case tools that would objectively quantify decisions and recommendations made to senior leadership both internal and external to the Marine Corps.

One of the more significant changes in the requirements determination process has been the inclusion of the Operating Forces, and the collaborative role of MARCORMATCOM to integrate the acquisition, logistics, and financial communities. Introduction of trade-offs based on buy versus repair analysis (which is an intricate part of the overall Marine Corps life cycle management program) was also instituted. The process was used for the first time for Program Objective Memorandum (POM) 2000.

### **2.3 Origin and Structure of the DLMP Requirements Determination Process**

The goals of the DLMP are to:

- (a) Identify depot maintenance equipment requirements (PEIs and SDRs).
- (b) Ensure requirements are consistent, credible, and justifiable so that adequate funds are allocated to the DLMP.
- (c) Ensure that a ready and controlled source of mission capable equipment is available for the warfighter.
- (d) Maintain the minimum infrastructure to ensure future Marine Corps needs are addressed for the sustainment of the warfighter.

The DLMP objectives for accomplishing the above listed goals are:

- (a) Ensure an objective process is in place to accommodate the logistics community and addresses warfighting capabilities.
- (b) Determine and validate equipment requirements optimizing the prioritization and best business practices.
- (c) Produce POM and budget exhibits, which accurately express required funding levels for validated equipment requirements.
- (d) Repair the proper weapon systems in a timely manner at a reasonable cost.
- (e) Ensure organic infrastructure remains adequate to meet future Marine Corps and Defense Planning Guidance (DPG) needs.
- (f) Provide efficient depot maintenance support through interservicing and contracting.

Prior to POM 2000 there was no linkage to warfighting capabilities, no integration of various logistics communities, limited linkage to the acquisition community, no corporate overview, and no PEI/spares ratio. Additionally, overall relationships and responsibilities were unclear and there

existed no formal requirement for execution feedback other than through the budget process. This necessitated the need to revise the process to accommodate these shortfalls. The new process is described below:

Figure 2-1 depicts the improved process by which equipment and associated reparable items requiring depot level repair are identified, aligned to a capability, prioritized/optimized, validated, and approved by the stakeholders. The stakeholders are identified below.

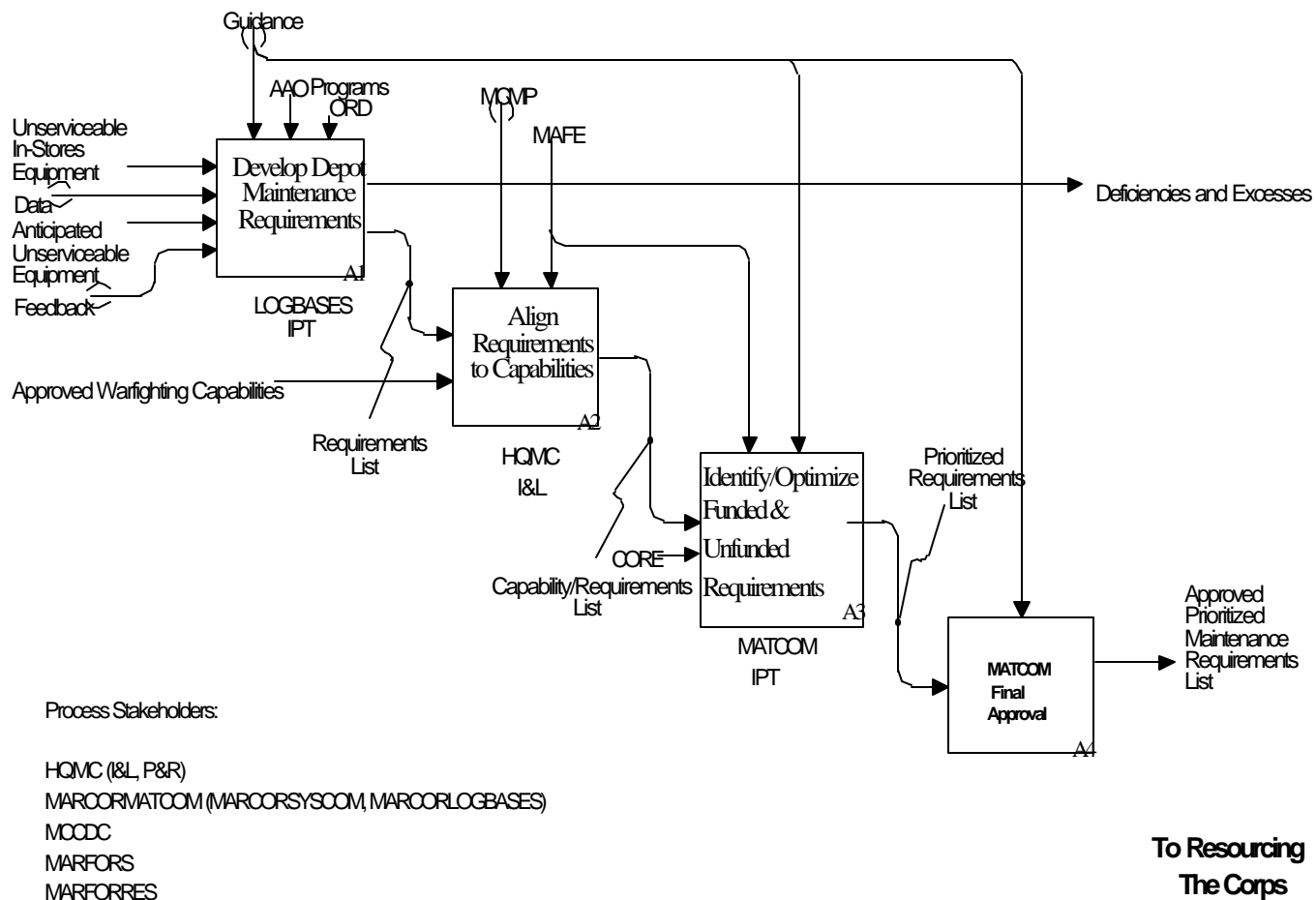


Figure 2-1

General Information: SDR requirements will be determined through the SDR Replenishment Stratification process. However, this automated process is still being developed by MARCORLOGBASES. The Handbook will be updated when the automated process is completed.

The Marine Corps Depot Maintenance requirements for PEIs are determined and reviewed through an iterative process on an annual basis and a quarterly basis. Within each block of Figure 2-1, an Integrated Product Team (IPT) is established. The IPT is comprised of representatives from the Marine Forces, COMMARCORMATCOM - COMMARCORSYSCOM and COMMARCORLOGBASES, MCCDC, and HQMC (Deputy Commandant (DC) I&L; DC, P&R; DC, PP&O). The Integrated Product

Team (IPT) membership remains the same through the process, however, the responsible or lead agent changes as the requirements move through the process.

### **Block A1 - Lead: Marine Corps Logistics Bases (MCLB) Albany**

MCLB Albany developed the Materiel Capability Decision Support System (MCDSS) to integrate a data warehouse and automated PEI stratification, DLMP, Readiness/Capability Evaluation, CORE, and War Gaming processes. MCDSS has been accepted by the Marine Corps as the primary tool to support the decision making process for all required actions, i.e., acquisitions, redistribution, DLMP, etc. MCO 4400.193 applies.

**Step 1:** The PEI Stratification sheets are sent to all the IPT representatives for further review and refinement of the initial requirement identified through the stratification process.

**Step 2:** COMMARCORSYSCOM provides an up-to-date listing of procurement initiatives, to include fielding schedules (phase-in/phase-out plans) to COMMARCORMATCOM.

**Step 3:** The DLMP requirements working conference is co-hosted by MARCORLOGBASES and MARCORSYSCOM. The process begins with the generation of a list of initial requirements for every depot level reparable principal end item. The PEI Stratification Module of the Materiel Capability Decision Support System (MCDSS) generates the list. A copy of this list (commonly called PEI Strats) is provided to the stakeholders prior to the conference for review and adjustments, as substantiated. Each depot level PEI is discussed regardless of identification by MCDSS as an initial requirement or not. This is just in case a stakeholder needs a requirement for that particular end item. The stakeholders reach consensus on the requirements for each PEI and then sign off on each PEI. In addition to establishing the requirements, the PMs provide a Statement of Work (SOW) that can be used to begin the first rough order of magnitude of the total Direct Labor Hours (DLHs) required to perform the work along with a Bill of Materiel (BOM). The DLHs are priced out using an approved DMAG rate and the materiel cost is added to come up with the total unit repair cost to be used in Program Objective Memorandum (POM) development. In addition the stakeholders prepare supporting justification for the approved requirements for use in defending the DLMP POM initiative.

**Step 4:** As a result of the conference, a consolidated list of approved DLMP requirements is developed costed out as stated in Step 3 previously. The PMs must prepare the baseline along with all recommended changes for final processing. The SOWs must be final and on the website (MARCORLOGBASES, SOWPEN) not later than 1 Jan prior to the year of execution. Once these final SOWs are on the website, the repair activity will revisit the rough order of magnitude DLHs and materiel and revise it as necessary. The results of this review and changes must be completed during the March time frame for use in the development of the NAVCOMPT budget in May. The cost is then adjusted based on scope of work identified within the appropriate Statement of Work (SOW) for changes in the type of repair to be performed (Inspect and Repair Only as Necessary (IROAN) to rebuild or vice versa). The list of requirements (number of units) and repair cost is submitted to the next step in the process.



## **Block A2 - Lead: Headquarters Marine Corps (DC I&L)**

**Step 5:** HQMC I&L will use the current edition of Marine Corps Bulletin 3000, enclosure (1) to determine the numerical warfighting values for each weapon system. These numerical values are used in the Dynamic Equipment Repair Optimization (DERO) Model (refer to Chapter 2, Section 2.4) and are assigned to PEI (s) as shown below:

- Those Table of Authorized Materiel Control Numbers (TAMCNs), which are, listed as pacing and major equipment (MEQPT) will receive the highest numerical score of 4.
- Those TAMCN(s) that are listed as only MEQPT but are not listed as pacing items will receive the second highest value of 3.
- Those TAMCN(s) not having a MEQPT or pacing Table of Equipment Number (T/E Number) will receive a numerical value of 2.
- All other TAMCN(s) requiring repair on the DLMP list that are not listed in MCBul 3000 (not readiness reportable) will receive a numerical value of 1.
- The resulting total score for each TAMCN represents its warfighting value and is incorporated in Block A3.

## **Block A3 - Lead: Commander, Marine Corps Materiel Command**

**Step 6:** COMMARCORMATCOM is responsible for determining how to select items to fund from the warfighting capabilities list with the limited amount of money nominally available to the program. This is accomplished by systematically and consistently considering the following important factors:

- a. Equipment scores calculated in Block A2:
- b. Current rotation programs identified by COMMARCORSYSCOM;
- c. Current USMC -wide ground equipment asset postures acquired through Step 1 of this process (PEI stratification);
- d. COMMARCORSYSCOM's procurement initiatives and phase-out plans acquired through Block A1;
- e. Official allowance data establishing the USMC War Material Requirement (WMR) acquired through Step 1 of this process (PEI Stratification) via LMI S:
- f. Minimum target availability percentages approved by COMMARCORMATCOM; and
- g. Tentative annual program budgets provided by DC/S Programs and Resources (P&R).

These factors are balanced and weighed in a multi-period optimization DERO model developed specifically for this purpose. The model provides a recommended list of funded and unfunded requirements based on the parameters input into the model. Using these parameters the model provides a recommendation that provides an optimum readiness return on investment. This list of funded and unfunded requirements is reviewed, adjusted and approved by all DLMP stakeholders. The stakeholders approved lists are then used in POM initiative development and support. This list is the basis for the POM and subsequent budgets as it provides an optimum readiness return on investment. In addition, readiness impacts by TAMCN are determined for use in justifying program requirements.

**Step 7:** MARCORMATCOM provides the final approved funded and unfunded list of requirements to MARCORLOGBASES for POM development.

**Step 8:** MARCORLOGBASES prepares the POM submission (D-13) for O&MMC/O&MMCR. The requirements input for POM, lists by TAMCN, the funded and unfunded levels/deferred maintenance by quantity and dollars, unit repair cost and the total repair costs. Using the requirements submitted in the POM as a baseline, track changes from the POM requirements through execution to include units and dollars. The initial POM submission includes the TAMCN listing that supports the funded and unfunded POM requirements. Marine Corps Program Codes (MCPC) further identifies the requirements, which classify the type of depot level maintenance.

- a. MCPC 620004 – Recoverable & Non Modernization Maintenance – consists of requirements that are based on unserviceable return averages and rotation programs that do not include PMC funding.
- b. MCPC 62024 – Performance and Life Cycle Related Maintenance – consists of requirements that the Marine Corps feels must be added back into the maintenance program as a result of fielding slippages and requirements that are felt to be necessary because it makes good business sense.
- c. MCPC 620104 – Modernization Related Maintenance – Rotation requirements that require both O&M and PMC funding to accomplish. (Requires careful scheduling.)

**Step 9:** COMMARCORMATCOM begins the process of briefing the POM Groups to justify and obtain resources for the DLMP. This step determines an approved funded and unfunded level for the DLMP.

**Step 10:** COMMARCORLOGBASES prepares the Operation and Maintenance, Marine Corps (O&MMC/O&MMCR/ Reserve) backup exhibits to the (OP-30/OP-30R) for each budget submission. The OP-30 displays funded and unfunded depot level maintenance requirements by commodity level for the current year, the budget year and the budget year +1. The backup exhibits lists, by TAMCN, the funded and unfunded levels/deferred maintenance by quantity and dollars, unit repair cost, and total repair costs. These backup exhibits also break out rotation prior year rollover, executable unfunded and unexecutable unfunded requirements.

Steps 1 through 10 above are repeated in the even years for the Program Review; however, the timelines are different (see Tables 1 and 2 below).

#### **Block A4 – Commander, Marine Corps Materiel Command**

**Step 11:** MARCORMATCOM approves and forwards the final DLMP requirements list to DC, P&R in accordance with the timelines established for the POM process.

##### **2.3.1 Responsibilities**

a. Headquarters Marine Corps (DC I &L):

1. Assigns warfighting values to all DLMP requirements.

b. Commander, Marine Corps Materiel Command

1. Designated as the Program Sponsor for depot maintenance. Program sponsorship entails receiving, reviewing, analyzing, validating, tracking and justifying depot maintenance requirements throughout the POM and PPBS process.

2. Adjudicates conflicts in the funded and unfunded requirements decision when the stakeholders cannot reach consensus.

3. Owner of the DLMP requirements determination process.

4. Responsible for providing MARCORLOGBASES a framework to report cost schedule and performance for the DLMP

c. Commander, Marine Corps Systems Command

1. Co-chairs the IPTs/conferences. Provides the latest information on program(s) such as acquisition schedules, fielding plans, phase-in/phase-out, and replacement cost of items.

2. Validates the DLMP requirements identified through the PEI Stratification process.

3. Performs an analysis of items for which the repair costs exceed 50% of the validated replacement cost. This analysis should identify alternative actions that can be taken (e.g., modification, product improvement program, service life extension program, new procurement) that will eliminate the need for rebuild or will reduce the rebuild costs in the future.

4. Provides outyear plans to COMMARCORMATCOM for any changes in scope of work (e.g., IROAN to rebuild or SDR to end item) for weapon systems.

5. Responsible for the Statement of Work (SOW) that supports the DLMP requirements.

6. Provides acquisition strategy and phasing plan information.

d. COMMARCORLOGBASES

1. Co chairs maintenance conferences.
2. Provides PEI Stratification sheets for all DLMP TAMCNs to all DLMP stakeholders for review and validation.
3. Produces deliverables as a result of the conference and provide to all stakeholders.
  - (a) List of all stakeholder approved DLMP requirements.
  - (b) Copies of all approved/disapproved 50% repair limitation decisions.
  - (c) List of the baseline SOWs with any known changes.
  - (d) Copies of all justification narratives.
4. Provides all of the DLMP requirements conference stakeholders with the specific conference deliverables (e. g., list of all TAMCN requirements for each FY reviewed, SOW baselines, phase-in/phase-out analysis, rotation plans (SLEP, PIP, mid-life, Weapons Exchange, Repair and Evacuation, etc.).
5. Prepares the POM, D13 and budget exhibits, (e.g., OP-30/30R, OP-32/32R) and TAMCN summaries, in support of the DLMP for both Active and Reserve units.
6. Runs the DERO and identifies funded and unfunded requirements based on their expertise.
7. Reports cost, schedule and performance of the DLMP to HQ, MATCOM.

### 2.3.2 Timelines

Table 2-1 depicts the timeframe each step of the process begins and ends with the POM year (odd years) and Table 2-2 reflects the timeframe each step of the process begins and ends with the Program Review (PR) year (even years).

### EXAMPLE: DLMP REQUIREMENTS (POM YEARS)

ID	Task Name	Duration	2002																
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May			
1	PEI Strats Submitted To Stakeholders	1 day																	
2	Review PEI Strats	20 days																	
3	Equipment Maintenance Conference	5 days																	
4	Determine Costs DLMP Req.	104 days																	
5	Warfighting Capability Impacts	42 days																	
6	Fielding Schedules/Exiting Inventory	5 days																	
7	Optimal Funding List/Readiness Impact	45 days																	
8	Prepares POM Submission	55 days																	
9	Brief POM Groups	64 days																	
10	Prepare OP-30/OP-30R To DoN	10 days																	

Table 2-1

### EXAMPLE: DLMP REQUIREMENTS (PR YEARS)

ID	Task Name	Duration	2002																
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May			
1	PEI Strats Submitted To Stakeholders	1 day																	
2	Electronic Review PEI Strats	20 days																	
3	Updated Elect Sub from Stakeholders	1 day																	
4	Determine Costs DLMP Req.	104 days																	
5	Warfighting Capability Impacts	42 days																	
6	Fielding Schedules/Exiting Inventory	5 days																	
7	Optimal Funding List/Readiness Impact	45 days																	
8	Prepares POM Submission	55 days																	
9	Brief POM Groups	64 days																	
10	Prepare OP-30/OP-30R To DoN	10 days																	

Table 2-2

## 2.4 Dynamic Equipment Repair Optimization (DERO) Model

This section provides the background and purpose for the development of the DERO model. In addition, it will provide a functional description of the model. The goal of the description is to clarify the origin of the data and assign responsibilities for the data collection and data assimilation process.

For purposes of this document, readiness is defined as the number of assets of a Principle End Item (PEI) that are "Ready For Issue (RFI)" divided by the "current FY Equipment Allowance File (EAF) quantity" of that same PEI.

Currently the Marine Corps owns roughly 350,000 pieces of ground equipment that could require repair or rebuild at one of its two maintenance depots. Each of these pieces would have to acquire the necessary funding for the maintenance action to take place. Due to the limited number of dollars available, the Marine Corps had a tremendous task making the determination as to how best to spend its depot level maintenance funds.

Until recently, this determination process was laborious, subjective and marked by a series of proposals, trade offs and additional proposals. In the end there was no assurance that the final product was optimal or even good for the Marine Corps as a whole. The DERO model is an attempt to expedite and provide objectivity to the process of determining how to allocate the limited depot repair dollars. In addition, it provides a high degree of assurance that the final determination provides the optimal equipment readiness across the Marine Corps.

The DERO model is a simple linear programming model with a single objective function and seven constraint equations. The model's objective function maximizes the aggregate readiness rating for all of the Marine Corps' fifth level reportable Table of Authorized Materiel Control Number (TAMCN) Principle End Items (PEI).

Prior to the execution of the DERO model, an Integer Program was used to allocate the necessary resources to all rotation and screening programs. These programs are funded completely before any funds are dedicated to repair individual TAMCN assets. The following section describes this program, along with the DERO model, in greater detail.

#### **2.4.1 Rotations Model**

***"Rotations"*** is an Integer Program to coordinate procurement and O&M funding. A given fleet of ground equipment may require modification, service life extension, product improvement, or mid-life rebuild or overhaul. In these cases, each piece of equipment in the fleet usually must be scheduled for recall and completion of required work. Typically, program offices responsible for the equipment dictate the time during which the work will be done, purchase kits for the equipment, and perhaps even contract for their installation. Dedicated resources for completing the work – production lines, parts, workers, contract support personnel, etc. – must be available from start to finish. In many cases, labor and other significant cost elements must be borne by depot-level maintenance funding from the Marine Corps Operations & Maintenance (O&M) appropriation – which is not under the control of the program office, though funding for capital equipment and parts, along with schedule information, may be.

Coordination of decentralized procurement funding from multiple program offices at Marine Corps Systems Command with centralized operations & maintenance funding at Logistics Bases presents a unique problem: provision of the "O&M tail." Fixed costs – e.g. establishment of a depot line, and variable costs, e.g. labor required, to perform or contract completion of modifications, service life extensions, etc. are nonnegotiable. If this funding is not available, the asset rotations cannot be completed, even if the program offices have purchased hardware and established contracts for a particular period. Funding shortfall is likely. It is imperative that PMs coordinate among the Commodity Program Offices to plan their rotations to insure no indirect obligation of large amounts of O&M funding occur.

Mandatory identification by each program office of several alternative “windows” during which the asset rotation could occur helps to ameliorate, if not solve, this problem. With such alternatives available, the depot maintenance program sponsor and supporting analysts can attempt to arrange these rotations to coincide with available funding *to the best extent possible*. Even with powerful integer programming techniques to help, there is no guarantee that the best selection of schedule alternatives across TAMCNs and fiscal years will not cost in excess of available funding. A means is required to identify the shortfalls and provide a basis for coordination to reschedule rotations or obtain additional funding to complete those that overlap with many others.

*Rotations* is an integer linear program that seeks the arrangement of multiple “once only” rotation programs – programs calling for the modification, overhaul, service life extension, etc. of each item in a fleet of equipment exactly once – that minimizes the largest single-year, single-appropriation funding shortfall across the time horizon of interest. After solving this problem, one can add the funding shortfall to the original budget – making the problem once again feasible – and proceed to select non-rotation assets for remaining depot-level maintenance funding on top of the rotation plan. A detailed output report clearly demonstrates any shortfalls encountered so that decision makers can correct the problem.

The formulations appearing below may appear imposing, but they’re not. Each is followed by a plain-language explanation that provides references to each part of the formulation. The formulations always use lower case for data elements and upper case for decision variables – the model can change the variables, but it can’t change the data elements.

The formulation of the *Rotations* model is presented below, followed by an explanation of the constraints. This formulation is patterned after that of Brown, Clemence, Teufert and Wood, *An Optimization Model for Modernizing the Army’s Helicopter Fleet*, Interfaces, 1991.

Indices:

$f$	Forces (appropriations): ACTIVE or RESERVE,
$t$	Table of Authorized Materiel control number (TAMCN) (equipment type), e.g. D0209,
$v$	Possible years in which a rotation program could start,
$w$	Possible years in which a rotation program could end,
$y$	Years in the decision horizon (e.g. 2002, 2003, ...);

Index Sets:

$T$	TAMCNs $t$ ,
$R$	Subset of $T$ , TAMCNs required to undergo a rotation – e.g., $R = \{Axxxx\}$ ,
$V_t$	Possible starting years for TAMCN $t$ rotation ( $t \in R$ ) -- e.g. Axxxx could start in 2002 or 2003,
$W_t$	Possible ending years for TAMCN $t$ rotation ( $t \in R$ ) -- e.g. Axxx could end in 2004 or 2005,
$VW_t$	Set of possible rotation start-end year pairs for TAMCN $t$ , $\{(v, w) : v \in V_t, w \in W_t\}$ , for example, for TAMCN Axxxx above, $VW_{Axxxx} = \{(2002, 2004), (2002, 2005), (2003, 2004), (2003, 2005)\}$ . Each of these pairs represents the time during which a rotation program could be funded,

$VW_{t,y}$  Possible TAMCN  $t$  start-end year pairs including year  $y$ , i.e.,  $\{(v, w) \in VW_t : v \leq y \leq w\}$ , for example,  $VW_{Axxxx,2005} = \{(2002, 2005), (2003, 2005)\}$ ;

Data:

$\underline{b}_{t,f}$  Minimum number of TAMCN  $t \in R$  assets that can or must be taken from force  $f$  each year of rotation,

$\bar{b}_{t,f}$  Maximum number of TAMCN  $t \in R$  assets that can or must be taken from force  $f$  each year of rotation,

$budget_{f,y}$  Funding available to force  $f$  in year  $y$ ,

$q_{t,f}$  Total quantity of TAMCN  $t$  assets required in rotation for  $f$  (over all years),

$rcost_t$  Cost per asset of TAMCN  $t$  in rotation (rebuild, modification, SLEP etc.), in dollars;

Variables:

$DELTA_{f,y}$  Dollar amount that force  $f$  has left over from its budget in year  $y$ , after paying for all rotated assets; if negative, force  $f$  is over-budget;

$RB_{t,f,y}$  Number of TAMCN  $t$  assets funded by  $f$  for rotation in year  $y$ ,

$P_{t,v,w}$  Indicator variables, set to 1 if TAMCN  $t$  rotation starts in year  $v$  and ends in year  $w$ , 0 otherwise,

$Z$  Maximum number of dollars saved after paying for all rotations, by any force in any year;

Formulation:

$$\text{Maximize } Z \quad [1]$$

Subject to

$$\sum_t rcost_t RB_{t,f,y} + DELTA_{f,y} = budget_{f,y} \quad \forall f, y; \quad [2]$$

$$Z \leq DELTA_{f,y} \quad \forall f, y; \quad [3]$$

$$\sum_{(v,w) \in VW_{t,y}} \underline{b}_{t,f} P_{t,v,w} \leq RB_{t,f,y} \leq \sum_{(v,w) \in VW_{t,y}} \bar{b}_{t,f} P_{t,v,w} \quad \forall t \in R, f, y; \quad [4]$$

$$\sum_y RB_{t,f,y} = q_{t,f} \quad \forall t \in R, f; \quad [5]$$

$$\sum_{(v,w) \in VW_t} P_{t,v,w} = 1 \quad \forall t \in R; \quad [6]$$

$RB$  are restricted to positive integers;  $Z$  and  $DELTA$  are unrestricted;  $P$  are binary.

Explanation

- Expression [1] is the objective function.
- Constraints [2] are budget constraints: the first term on the left-hand side represents the funding spent on all rotation programs by force  $f$  in year  $y$ , and the remainder -  $DELTA$  - is that money left over, or saved. The sum of these two monetary quantities must equal the available



funding to each force in each year. Since *DELTA* is not restricted to be a positive variable, budget overruns may occur. (If there is any way to prevent such an overrun with the options provided, this model will find it.)

- Constraints [3], along with the objective function, indicate that this savings should be as large as possible – or, equivalently, that budget overruns caused by the requirement to fund rotation programs should be as small as possible.
- Constraints [4] require that, during the period in which a rotation program is scheduled, the quantities funded for TAMCN  $t$  by force  $f$  be between the minimum and maximum allowed. Further, these constraints prevent funding any assets of TAMCN  $t$  outside of the years in which the rotation is active.
- Constraints [5] require the total number of assets of TAMCN  $t$  funded by force  $f$  in all years to equal the quantity required for that force to rotate. This could be, for example, the number of assets that force owns.
- Constraints [6] require that each TAMCN be scheduled for exactly one starting and ending year; in other words, each rotation program must be scheduled sometime in the time horizon.

#### 2.4.2 DERO Model

DERO incorporates the solution of the *Rotations* model above in the itemization of yearly depot-level maintenance funding, in a way that maximizes resulting availability of ground equipment. The formulation below extends that found in the article to provide for tracking of RFI and NRFI excesses, asset redistribution, and explicit incorporation of rotation programs with the addition of the *Rotations* model.

Note: Any variable marked with an asterisk (\*) in the formulation of this model represents the optimal value of this variable from the *Rotations* model being used as *data*; i.e., this variable is “fixed” after the *Rotations* solve completes and is not allowed to change during the solution of DERO itself.

Indices:

$f$	Forces (appropriations): ACTIVE or RESERVE,
$s$	Line segments bounding the objective function, $s = 1, 2, \dots$
$t$	Table of Authorized Materiel control number (TAMCN) (equipment type),
$v$	Possible years in which a rotation program could start,
$w$	Possible years in which a rotation program could end,
$y$	Years in the decision horizon (e.g. 2002, 2003, ...);

Index Sets:

$C$	TAMCNs in “screening programs” funded by depot-maintenance accounts, or lump-sum payments denoted by unique TAMCNs indicating mandatory payment of a particular amount by these accounts,
$S$	Line segments $s$ ,
$T$	TAMCNs $t$ ,
$R$	Subset of $T$ , TAMCNs required to undergo a rotation,
$V_t$	Possible starting years for TAMCN $t$ rotation ( $t \in R$ ),
$W_t$	Possible ending years for TAMCN $t$ rotation ( $t \in R$ ),

$VW_t$  Set of possible rotation start-end year pairs for TAMCN  $t$ ,  $\{(v, w) : v \in V_t, w \in W_t\}$ ,  
 $VW_{t,y}$  Possible TAMCN  $t$  start-end year pairs including year  $y$ , i.e.,  $\{(v, w) \in VW_t : v \leq y \leq w\}$ ;

Data:

$\alpha$  Discount factor to emphasize near-term years ( $\alpha < 1$ ),  
 $\underline{b}_{t,f}$  Minimum number of TAMCN  $t \in R$  assets that can or must be taken from force  $f$  each year of rotation,  
 $\bar{b}_{t,f}$  Maximum number of TAMCN  $t \in R$  assets that can or must be taken from force  $f$  each year of rotation,  
 $budget_{t,y}$  Funding available to force  $f$  in year  $y$  after addition of shortfalls, if any, caused by rotation and screening,  
 $dspare0_t$  Starting number of unstratified (excess) NRFI assets of TAMCN  $t$ ,  
 $icost_t$  Cost for “inspect and repair only as necessary” (IROAN) per asset of TAMCN  $t$ ,  
 $intcpt_s$  Vertical intercept of segment  $s$ , in objective function units,  
 $issue_{t,y}$  Number of TAMCN  $t$  assets newly procured in year  $y$ ,  
 $pen_t$  Per-asset shortage cost for failing to meet  $rtgt$  (readiness target) for TAMCN  $t$ ,  
 $pen2_t$  Very large per-unit (elastic<sup>1</sup>) penalty for adjusting initial RFI quantity (see *CHEAT* below),  
 $q_{t,f}$  Total quantity of TAMCN  $t$  assets required in rotation for  $f$  (over all years),  
 $rcost_t$  Cost per asset of TAMCN  $t$  in rotation (rebuild, modification, SLEP etc.),  
 $rtgt_{t,f,y}$  Target availability percentage of TAMCN  $t$  at force  $f$ , year  $y$ ,  
 $sbl_{t,f}$  Starting number of not-ready-for-issue (NRFI) assets of TAMCN  $t$  at force  $f$ ,  
 $slope_s$  Slope of segment  $s$  in objective function units per availability percentage point,  
 $srfi_{t,f}$  Starting number of RFI assets of TAMCN  $t$  at force  $f$ ,  
 $tilim_{t,f,y}$  Upper bound on number of turn-ins of TAMCN  $t$  from  $f$  in  $y$ ,  
 $uspare0_t$  Starting number of unstratified (excess) RFI assets of TAMCN  $t$ ,  
 $usr_{t,f,y}$  Unserviceable returns of  $t$  from  $f$  in  $y$ , exclusive of specific assets demanded for rotation,  
 $value_t$  Warfighting value of TAMCN  $t$  as determined by HQMC, DC I & L (LPC-2),  
 $wmr_{t,f,y}$  War materiel requirement of  $t$  at  $f$  in  $y$ ,  
 $y_0$  First year in decision horizon;

Fixed variables (optimal values determined by *Rotations* and used here as data):

$RB^*_{t,f,y}$  Number of TAMCN  $t$  assets funded by  $f$  for rotation in year  $y$ ,  
 $P^*_{t,v,w}$  Indicator variables, set to 1 if TAMCN  $t$  rotation starts in year  $v$  and ends in year  $w$ , 0 otherwise,

Variables:

$CHEAT_{t,f}$  Nonexistent TAMCN  $t$  assets stratified to  $f$  at beginning of horizon to account for poor forecasting<sup>2</sup>,

<sup>2</sup> “Elastic” variables (see Brown, Clemence, Teufert and Wood (1991)). These variables provide for feasibility by “stretching” constraints that cannot be met strictly. The “elasticity” is provided by penalizing the variables’ use.

$DEFIND_{t,f,y}$	Binary, set if $f$ is short of its allowance ( $wmr$ ) of $t$ at end of $y$ ,
$FLOAT_{t,f,y}$	Quantity of RFI assets of $t$ stratified to $f$ in $y$ (new or formerly excess),
$ISNRFI_{t,y}$	In-stores (depot) NRFI quantity of $t$ and end of year $y$ ,
$ISRFI_{t,y}$	In-stores (depot) RFI quantity of $t$ at end of year $y$ ,
$NRFI_{t,f,y}$	Quantity of TAMCN $t$ NRFI assets stratified to $f$ at end of year $y$ ,
$RC_{t,f,y}$	Quantity of TAMCN $t$ RFI assets recalled for rotation from $f$ at beginning of $y$ ,
$RFI_{t,f,y}$	Quantity of TAMCN $t$ RFI assets stratified to $f$ at end of year $y$ ,
$RPR_{t,f,y}$	Quantity of TAMCN $t$ assets funded under IROAN for $f$ in $y$ ,
$SHORT_{t,f,y}$	Shortfall of TAMCN $t$ RFI assets stratified to $f$ at end of $y$ with respect to availability target <sup>1</sup> ,
$STRN_{t,f,y}$	Quantity of NRFI TAMCN $t$ assets restratified to $f$ in $y$ (paper-redistributed excess NRFI),
$TEDEF_{t,f,y}$	Difference between $wmr_{t,f,y}$ and quantity of $t$ stratified to $f$ at end of $y$ (in any condition),
$TIS_{t,f,y}$	Quantity of TAMCN $t$ RFI assets removed from stratification to $f$ in $y$ ,
$TIU_{t,f,y}$	Quantity of TAMCN $t$ NRFI assets removed from stratification to $f$ in $y$ without being repaired;

Formulation:

Maximize

$$\sum_{t,f,y} a^{y-y_0} value_t(SCORE_{t,f,y} - pen_t SHORT_{t,f,y}) - \sum_{t,f} pen2_t CHEAT_{t,f} \quad [7]$$

Subject to

$$\sum_{t \notin R} icost_t RPR_{t,f,y} + \sum_{t \in R} rcost_t RB_{t,f,y}^* \leq budget_{f,y} \quad \forall f, y; \quad [8]$$

$$SCORE_{t,f,y} \leq intcpt_s + slope_s \frac{RFI_{t,f,y}}{wmr_{t,f,y}} \quad \forall s, t \notin C, f, y; \quad [9]$$

$$ISNRFI_{t,y} = \begin{cases} dspare0_t + \sum_f TIU_{t,f,y} - \sum_f STRN_{t,f,y} & \forall t \notin C, y = y_0, \\ ISNRFI_{t,y-1} + \sum_f TIU_{t,f,y} - \sum_f STRN_{t,f,y} & \forall t \notin C, y > y_0; \end{cases} \quad [10]$$

$$ISRFI_{t,y} = \begin{cases} uspare0_t + issue_{t,y} - \sum_f FLOAT_{t,f,y} + \sum_f TIS_{t,f,y} & \forall t \notin C, y = y_0, \\ ISRFI_{t,y-1} + issue_{t,y} - \sum_f FLOAT_{t,f,y} + \sum_f TIS_{t,f,y} & \forall t \notin C, y > y_0; \end{cases} \quad [11]$$

$$NRFI_{t,f,y} = \begin{cases} sbl_{t,f} + usr_{t,f,y} \left(1 - \sum_{(v,w) \in VW_{t,y}} P_{t,v,w}^*\right) + RC_{t,f,y} - RB_{t,f,y} \\ - RPR_{t,f,y} - TIU_{t,f,y} + STRN_{t,f,y} & \forall t \notin C, f, y = y_0, \\ NRFI_{t,f,y-1} + usr_{t,f,y} \left(1 - \sum_{(v,w) \in VW_{t,y}} P_{t,v,w}^*\right) + RC_{t,f,y} - RB_{t,f,y} \\ - RPR_{t,f,y} - TIU_{t,f,y} + STRN_{t,f,y} & \forall t \notin C, f, y > y_0; \end{cases} \quad [12]$$

$$RFI_{t,f,y} = \begin{cases} srft_{t,f} + CHEAT_{t,f} - usr_{t,f,y} \left(1 - \sum_{(v,w) \in VW_{t,y}} P_{t,v,w}^*\right) - RC_{t,f,y} + RB_{t,f,y} \\ + RPR_{t,f,y} - TIS_{t,f,y} + FLOAT_{t,f,y} & \forall t \notin C, f, y = y_0, \\ RFI_{t,f,y-1} - usr_{t,f,y} \left(1 - \sum_{(v,w) \in VW_{t,y}} P_{t,v,w}^*\right) - RC_{t,f,y} + RB_{t,f,y} \\ + RPR_{t,f,y} - TIS_{t,f,y} + FLOAT_{t,f,y} & \forall t \notin C, f, y > y_0; \end{cases} \quad [13]$$

$$RFI_{t,f,y} \geq rtgt_{t,f,y} wmr_{t,f,y} - SHORT_{t,f,y} \quad \forall t \notin C, f, y; \quad [14]$$

$$TEDEF_{t,f,y} \leq DEFIND_{t,f,y} wmr_{t,f,y} \quad \forall t \notin C, f, y; \quad [15]$$

$$TIU_{t,f,y} + TIS_{t,f,y} \leq (1 - DEFIND_{t,f,y}) tilim_{t,f,y} \quad \forall t \notin C, f, y; \quad [16]$$

$$NRFI_{t,f,y} + RFI_{t,f,y} + TEDEF_{t,f,y} \geq wmr_{t,f,y} \quad \forall t \notin C, f, y; \quad [17]$$

Variable bounds:

$$RPR_{t,f,y} \leq usr_{t,f,y} \left( 1 - \sum_{(v,w) \in VW_{t,y}} P_{t,v,w}^* \right) \quad \forall t, y; \quad [18]$$

$$RC_{t,f,y} \leq RB_{t,f,y}^* \quad \forall t \in R, f, y; \quad [19]$$

$$RPR_{t,f,y} = usr_{t,f,y} \quad \forall t \in C, f, y; \quad [20]$$

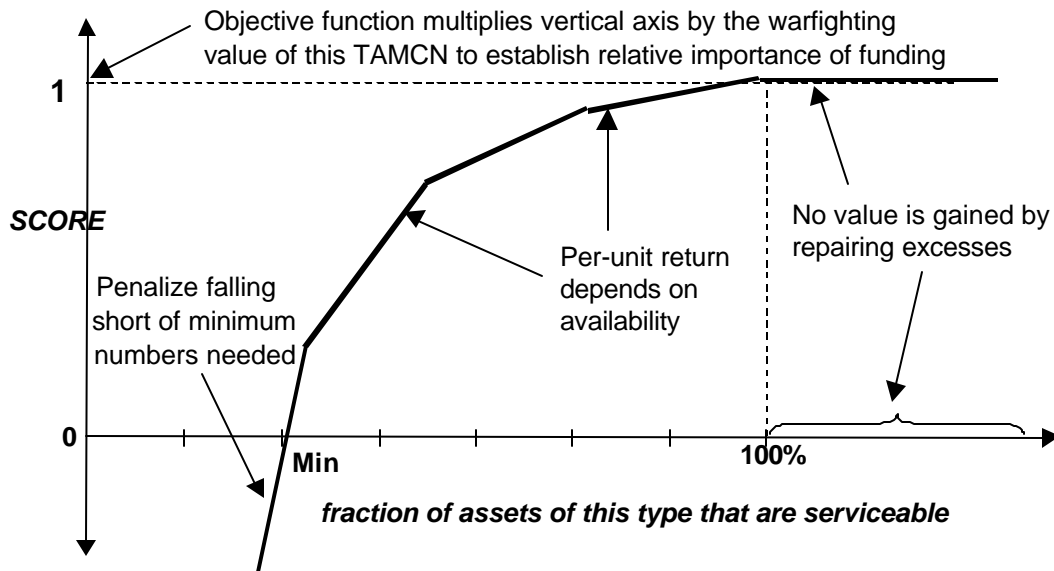
$$SCORE_{t,f,y} \leq 1 \quad \forall t, f, y; \quad [21]$$

$RB, RPR$  positive integers;  $DEFIND, P$  binary;  $SCORE$  free; remaining variables  $\geq 0$ .

Note: Reasonable upper bounds were calculated *a priori* for integer variables, and judicious constraints were placed on the use of *CHEAT*. See the GAMS implementation for these details.

#### Explanation

- Expression [7] is the objective function. The penalty terms detract for failure to meet availability targets and for having to use notional RFI assets to make up for forecasted unserviceable returns in excess of available RFI.
- Constraints [8] are budget constraints for each force and year. The first term on the left-hand side captures IROAN and screening expenditures; the second captures rotation costs.
- (\*\*\*) An annoying amount of explanation is due here to ensure understanding. Constraints [9] calculate the score achieved by one TAMCN at one force in one year by way of the piecewise-linear objective function (Figure 1). The general form is a line,  $y = b + mx$  where  $x$  is the independent variable (equipment availability),  $m$  is the slope of the line (return per availability percentage point),  $b$  is the intercept of the line, and  $y$  is the dependent variable (score). Because [9] are also subscripted by  $s$ , this expression is evaluated for each line segment and the  $SCORE$  for one TAMCN, one force, and one year is constrained to be less than the smallest score over all segments. Multiple segments allow for decreasing marginal returns to availability by making the slope of successive segments shallower and shallower. The ratio  $RFI/wmr$  is the achieved end-of-year availability of the equipment and is the dependent variable here; you can achieve a higher score by increasing this ratio. In turn, it is increased by raising  $RFI$ , again in turn increased by funding more NRFI equipment for IROAN or other rotation or issuing new equipment. Similarly, the score decreases as failure to fund assets reduces availability; the per-unit return increases with lower scores because we should worry more about low-readiness equipment. Again, this is achieved by the piecewise-linear objective function. This calculation of  $SCORE$  is the principal component of the objective function [7] and is what drives the entire model.



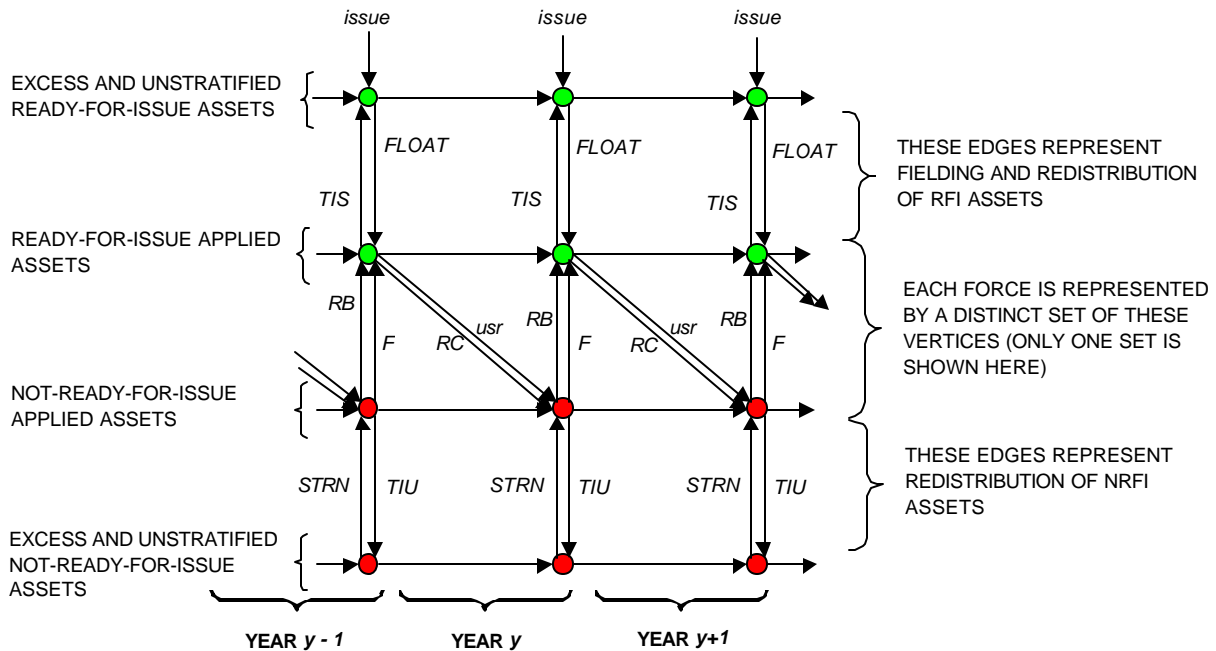
**Figure 1.** Illustration of score calculation. This figure illustrates one major strength of using optimization instead of just prioritizing equipment. Here, both *readiness* (availability, or E-rating) and warfighting value contribute to determining which assets to fund. Further, the decreasing returns make it more important to fund an asset at 60% availability than 90%. Warfighting value is incorporated as follows. For two identical TAMCNs – A and B – with the same asset posture and minimum allowed availability but different warfighting values  $a$  and  $b$ , funding the next asset of A will be  $a/b$  times as important as funding the next asset of B.

- Constraints [10] keep track of in-stores NRFI assets from year to year that are not stratified to any stakeholders – basically, they are NRFI excesses. These constraints say that the number of in-stores NRFI assets you have this year equals what you had last year, plus the sum of all assets taken out of stratification to all the forces this year, minus the sum of all assets that used to be excess but that you stratified to someone this year.
- Constraints [11] keep track of in-stores RFI assets from year to year that are not stratified – basically, they are RFI excesses. These constraints say that the number of in-stores RFI assets you have this year equals what you had last year, plus any newly procured assets, less all those you stratified to someone, plus those serviceable excesses you took out of stratification to the forces (for redistribution, perhaps).
- Constraints [12] and [13] look bad but are not. They keep track of stratified or available RFI assets and stratified NRFI assets from year to year. Figure 2 is a picture of constraints [10]-[13] that is much easier to understand than all the algebra.

Constraints [12] explain that, from year to year, you can add to stratified NRFI assets by having unserviceable returns (*usr*), by specifically recalling yet more assets (*RC*), or by stratifying previously NRFI excesses to a particular force (*STRN*). You can reduce stratified NRFI assets by funding them to become RFI (*RB* and *RPR*), or by making them excess (*TIU*).

Constraints [13] similarly explain logic regarding stratified (available or in-stores) RFI assets. From year to year, you can increase this quantity by funding NRFI assets (*RB*

and  $RPR$ ), or by receiving new or formerly excess RFI assets ( $FLOAT$ ). You can decrease it by unserviceable returns ( $usr$ ), further recall of assets ( $RC$ ), or turn-in of assets in excess of T/E ( $TIS$ ) for redistribution.



**Figure 2.** Graphical view of Constraints [10]-[13]; see text for further detail. Basically, these constraints model the stratification decisions made daily in principal end item stratification, but at an aggregate level.

- Constraints [14] are explained in the Military OR Journal article and are elastic minimum readiness constraints. They say that the number of assets RFI has to be at least  $rtgt$  percent of the War Materiel Requirement, and if not, you'll incur a penalty ( $pen*SHORT$ , see the objective function [7]) for each asset you're below the minimum. Applied in consonance with [13] regarding where RFI assets come from, this is a further incentive to provide funding or redistribute assets as required to meet the goals.
- Constraints [15], [16], and [17] together prevent arbitrary redistribution of assets. The variables  $TIU$  and  $TIS$  (turn-in unserviceable, turn-in serviceable) reflect decisions to take assets that are stratified or available to force  $f$ , where possible, and place them in-stores ( $ISNRFI$ ,  $ISRFI$ ) for potential redistribution to avoid incurring repair costs. This is an important incentive, but no one ever wants to give up equipment – and it may not always be a good idea. These constraints stipulate that no such redistribution of assets from a stakeholder (force, 'waterfall element,' etc) can occur unless that stakeholder has excess assets above T/E. This is SOP for the inventory managers, but the optimization model needs to be told it can't get away with doing that just to raise average readiness.<sup>3</sup>

<sup>3</sup> To understand how these constraints accomplish this, remember that  $DEFIND$  can only be 0 or 1. If stratified assets ( $NRFI + RFI$ ) fall short of WMR, then  $TEDEF$  has to be positive (per [17]), so  $DEFIND$  must be 1 to satisfy [15]... and so to satisfy [16], both  $TIU$  and  $TIS$  must be zero.

- Constraints [18] are administrative constraints that limit the number of assets funded for repair to the number of unserviceable returns, per standard request of program management, regardless of asset posture, etc.... when a rotation program is ongoing (ugly summation term equals 1), ignore the unserviceable returns (*RPR* are limited to zero) in favor of the rotation plan (developed in the *Rotations* model). These can be implemented as variable upper bounds instead of constraints.
- Constraints [19] prevent recalling assets when no funding is available to rebuild them. Again these can be upper bounds on variables instead of proper constraints.
- Constraints [20] force the model to fund anything identified as a screening program. Implemented as fixed variables, not constraints.
- Constraints [21], the upper bounds on *SCORE* variables, ensure that no incentive is present to fund assets in excess of the WMR (see Figure 1; look at the horizontal segment past 100% availability – that's [21]).

This concludes the description of the *Rotations* program and the DERO model. In the following two sections we will look at the input files and output data. We will discuss both the formats and contents.

### 2.4.3 Output Reports

DERO produces two principal output files with the GAMS PUT Writing Facility (see the GAMS documentation for details). Though other reports can be created easily with this facility, the following two files have proven useful enough to reuse many times:

FEASIBLE.CSV (appropriate for spreadsheets)

DETAIL.CSV (appropriate for spreadsheets or databases)

These are comma-delimited text files that can be read by any database or spreadsheet program. An explanation of each is found below.

#### FEASIBLE.CSV: Feasibility of Rotation and Screening Programs

This report has two purposes:

- Provide detail and summary information regarding how the *Rotations* model scheduled the various SLEP, PIP, and etc. rotation programs from the alternatives provided.
- Provide summary information for each appropriation (O&MMC/O&MMCR/O&MMC/O&MMCR or ACTIVE/RESERVE respectively) to show how much, in the best case, annual budgets have to be violated to fund all of the rotation and screening programs.

It has three consecutive tabular sub-reports. Each is described below with an explanation of the fields (columns) in each.



1. Rotation Program Summary by TAMCN. This subreport indicates the starting and ending years for all rotation programs such that the largest cost overrun in any year is minimized, and the corresponding total quantities completed and total costs incurred by TAMCN.

\*

Field Name	Type	Description
TAMCN	Text	Five-place alphanumeric Table of Authorized Materiel Control Number.
START	Number	Year in the FYDP in which the rotation starts. Programs that start earlier than the first year or end later than the last year have "boundary conditions;" i.e. you need to subtract out the quantities to be done outside the FYDP before solving the model and fix the starting or ending point at the first or last year in the FYDP, respectively.
END	Number	Year in the FYDP in which the rotation ends. See the note above regarding boundary conditions.
TOTQTY	Number	Total number of assets that completed rotation between years START and END, inclusive.
TOTCOST	Number	Total cost of completing TOTQTY assets across the indicated years, inclusive. Only meaningful if analysis is done in constant dollars.

Rotation Program Summary Subreport: Description and explanation.

2. Rotation Program Detail. This subreport shows by TAMCN, FY and FORCE (appropriation) how many assets were funded and what the total cost was.

Field Name	Type	Description
TAMCN	Text	Five-place alphanumeric Table of Authorized Materiel Control Number.
YEAR	Number	Fiscal year.
QTY (ACT)	Number	Quantity rotated from ACTIVE owners (all but Reserve T/A and Reserve In-Stores) and paid for from the O&M,MC appropriation.
QTY (RES)	Number	Quantity rotated from RESERVE owners (Reserve T/A and Reserve In-Stores) and paid for from the O&M,MCR appropriation.
ACT EP	Number	(ACTIVE Extended Price): Cost to complete QTY(ACT) units.
RES EP	Number	(REServe Extended Price): Cost to complete QTY(RES) units.

Rotation Program Detail subreport: Description and explanation.

3. Funding Status and Feasibility. This report summarizes by FY and FORCE (appropriation) the number of programs and number of units in rotation, total cost for completing, number of screening programs and their cost, available funding, and savings or shortfall.

Field Name	Type	Description
"****" or blank		If starred, a funding shortfall exists (see SHORTFALL).
APPN	Text	"ACTIVE" = O&MMC; "RESERVE" = O&MMCR
YEAR	Number	Fiscal year
NROTPGMS	Number	Number of active rotation programs

NASSETS	Number	Number of assets rotated under all active rotation programs
TOTRCOST	Number	Total cost of completing NASSETS in the indicated FY
NSCRNP	Number	Number of active screening programs
TOTSCOST	Number	Total cost of completing NSCRNP screening programs in the indicated FY
BUDGET	Number	Funding available to APPN in FY
SHORTFALL	Number	=TOTSCOST + TOTRCOST - BUDGET; if less than zero, then funding is left over to pay for unserviceable returns above and beyond screening and rotations. If greater than zero, this number represents the number of dollars spent on screening and rotations in excess of available funding.

**Funding Status and Feasibility sub-report:** Description and explanation.

DETAIL.CSV: Detailed Output of Asset Posture, Decision Variables, and Readiness

The detail report is in a tabular form. It has 22 fields (columns) in each record (row). Each field is explained below. In most cases, the field names parallel index, data and variable definitions from the *DERO* and *Rotations* formulations; please refer to those.

Field Name	Data Type	Description
TAMCN*	Text	Five-place alphanumeric Table of Authorized Materiel Control Number.
FORCE*	Text	"ACTIVE" or "RESERVE," reflecting owning organizations falling under one of two appropriations (O&MMC or O&MMCR, respectively).
SCORE	Number	HQMC-determined equipment relative warfighting value corresponding to this TAMCN.
STATUS*	Text	Can be S, R, or I. 'S' indicates screening programs; 'R' indicates rotation programs; and 'I' the remainder (principally IROAN).
FY*	Number	Fiscal year.
WMR	Number	Portion of the War Materiel Requirement (AAO) comprised by the total allowance or Table of Equipment quantity of owning organizations of this TAMCN, force,
SRFI	Number	Beginning-of- year quantity of assets RFI and stratified to this FORCE this FY.
CHEAT	Number	Notional <i>cumulative</i> (up to and including indicated FY) quantity of equipment that had to be added to SRFI to make subsequent unserviceable returns forecasts feasible. In other words, if SRFI were 10 and the first year's unserviceable returns were 20 with no funding available, then CHEAT would have to be 10 to avoid having a negative number of RFI assets. This is an "elastic" variable and is penalized heavily.
SNRFI	Number	Beginning-of-year quantity of assets NRFI and stratified.
USR	Number	Unserviceable returns from this force of this TAMCN in this FY.

Field Name	Data Type	Description
RC	Number	Separately from USR above, this is the number of assets recalled from this force of this TAMCN in this FY.
RPR	Number	For status "S" and "I", number of assets of this TAMCN funded by this force in this FY.
RB	Number	For status "R" (rotation programs), this is the number of assets funded by this force in this FY.
TIU	Number	(Redistribution data) – Number of assets, previously NRFI or returned as unserviceable in this FY, that were removed from explicit stratification to this force and placed in in-stores NRFI unstratified, or restratified via the STRN variable to another force. Please refer to the flow diagram (labeled "Figure 2") depicting asset posture and redistribution logic that accompanies the current DERO formulation.
TIS	Number	(Redistribution data) – Number of assets that were removed from explicit stratification to this force and placed in in-stores RFI unstratified, or restratified via the FLOAT variable to another force. If this value is nonzero, it means that a redistribution of RFI excesses has taken place (which can be verified by adding SRFI + SNRFI and comparing against WMR). Please refer to the flow diagram (labeled "Figure 2") depicting asset posture and redistribution logic that accompanies the current DERO formulation.
STRN	Number	(Redistribution data) – Number of assets that were removed from NRFI unstratified quantities (tracked internally by DERO/GAMS) and explicitly stratified to a particular force, increasing their stratified NRFI quantity. If this value is nonzero, it usually means that the quantity of equipment stratified to that force was less than the force's total quantity authorized. This is entirely consistent with standard PEI Stratification logic. Please refer to the flow diagram (labeled "Figure 2") depicting asset posture and redistribution logic that accompanies the current DERO formulation.
FLOAT	Number	(Redistribution and fielding data) – Number of assets, previously either RFI excess and unstratified, force-held excess, or newly procured, that were stratified as RFI to this force in this FY. Please refer to the flow diagram (labeled "Figure 2") depicting asset posture and redistribution logic that accompanies the current DERO formulation.
RFI	Number	End-of-FY quantity of assets of this TAMCN that are RFI and stratified to this force (as a result of funding and redistribution decisions as they appear in the other fields).
NRFI	Number	End-of-FY quantity of assets of this TAMCN that are RFI and stratified to this force (as a result of funding and redistribution decisions as they appear in the other fields).
RDY	Number	End-of-FY "E-rating," equal to zero for screening programs (status 'S') and equal to RFI /WMR for status 'I' and 'R'.

Field Name	Data Type	Description
COST	Number	Total cost in dollars for repairing or rebuilding the indicated number of assets. Equal to (RPR + RB) times Unit_Cost.
Unit_Cost	Number	Repair or rebuild cost per unit for this TAMCN in this FY. <b>Note: It is the user's responsibility to ensure that costs and budgets are consistent throughout the model</b> (specified in input files).

DETAIL.CSV: Table documentation. The "\*" next to four entries indicates that these uniquely identify the collection of equipment to which the remaining fields in each record pertain.

#### Common Tasks Performed with DETAIL Report

##### 1. Determining how many of a particular TAMCN got funded in a particular year.

- a. Open the DETAIL Report.
- b. Identify the TAMCN(s), FORCE(s), and FY(s) of interest.
- c. Find the corresponding record(s) in the DETAIL report. It appears in order by TAMCN, then by FY, and then by FORCE.
- d. For Status 'R' TAMCNs, the 'RB' field will indicate the number of assets funded for rotation in the indicated year. (The 'USR' field in this case is not indicative of a change in asset posture.) Rotation detail is found in the file 'FEASIBLE.CSV' described separately.
- e. For Status 'I' and 'S' TAMCNs, USR indicates the 'maintenance requirement' (forecasted unserviceable returns). Compare this against the 'RPR' field, which indicates how much of that requirement (if any) was funded in the model's optimal solution.

##### 2. Creation of "Funded/Unfunded List."

- a. By TAMCN, FORCE (Appropriation), and FY:
  - Funded quantity is shown by RPR + RB.
  - "Unfunded" quantity is (USR-(RPR+RB)).
- b. This information can be placed in any format desired. A database query or set of spreadsheet manipulations can provide the desired results.

##### 3. Determining Average E-Rating by FY and force.

- a. E-rating does not apply to screening programs because they do not have an asset posture.
- b. Therefore, to get average E-rating by FY and force, compute an average of the 'RDY' field for all records possessing the FY and FORCE of interest but where STATUS is not 'S'.

##### 4. Determining Differences between Quantities as Budgets Change.

- a. A comparison of two budget levels:
  - (1) Generate one 'DETAIL.CSV' file for each budget level.
  - (2) For identical records in each file as indexed by TAMCN, FORCE, and FY, compare the two fields of interest. For example, the difference in RDY from one file to the next is E-rating improvement by TAMCN, FORCE and FY.

b. The preceding technique can also be applied to the average E-ratings determined in #3 above. The difference is to compare the average E-rating over *all* TAMCNs for a specific FORCE and FY, or just FY, remembering not to include TAMCNs with status 'S.'

#### **2.4.4 Responsibilities/Timelines**

##### **1. Commander, Marine Corps Logistics Bases**

a. Responsible for determining funded and unfunded depot maintenance requirements by using the DERO as a tool as well as input from management. Submit to MATCOM Headquarters any funded/unfunded issues that cannot be resolved by the stakeholders.

b. In accordance with the table below, provides input data in support of the DERO Model.

c. Builds the list of approved funded and unfunded quantities.

##### **2. Commander, Marine Corps Systems Command**

a. In accordance with the table below, provides input data in support of the DERO model.

TABLE NAME	Description Of Table	RESPONSIBLE AGENCY	UPDATE FREQ
Availability Goal	Denotes the desired Readiness percentage for each TAMCN by year	MATCOM	***
Budget Table	Denotes the budget amount by year and by force (i.e. Active or Reserve)	MATCOM	***
Cost	Denotes the cost to repair or rebuild one specific TAMCN in one specific YEAR	LOGBASES	***
Fielding Quantities	Denotes the number of a specific TAMCN fielded in one specific YEAR	LOGBASES / SYSCOM	***
Force Table	Active or Reserve	MATCOM	
NRFI Not Stratified	Denotes the number of a specific TAMCN that is NOT READY FOR USE and is NOT STRATIFIED	LOGBASES	Quarterly
NRFI Stratified	Denotes the number of a specific TAMCN that is NOT READY FOR USE and IS STRATIFIED	LOGBASES	Quarterly
RFI Stratified	Denotes the number of a specific TAMCN that is READY FOR USE and IS STRATIFIED	LOGBASES	Quarterly
RFI Excesses (Unstratified)	Denotes the number of a specific TAMCN that is READY FOR USE and is NOT STRATIFIED ( <b>EXCESS</b> )	LOGBASES	Quarterly
Rotation Cost	Denotes the cost to place one specific TAMCN through a rotation program in a specific YEAR.	LOGBASES / SYSCOM	***
Rotation Quantities Table	Denotes the MINIMUM and MAXIMUM number per year of a specific TAMCN, in a specific FORCE that will under go a Rotation Program.	LOGBASES / SYSCOM	***
Rotation Types	Denotes the type of Rotation Program by specific TAMCN (i.e. PIP, MIDLIFE, SLEP)	LOGBASES / SYSCOM	***
Screening	Denotes the specific TAMCN that will undergo a Screening Program	LOGBASES / SYSCOM	***
Segment Table	Provides the Slope and "Y" Intercept values for five segments used to denote break points for ranges of readiness.	MATCOM	***
Start Year Table	Denotes the <u>Earliest</u> Fiscal Year that a specific TAMCN may <u>start</u> a rotation program.	LOGBASES / SYSCOM	***
End Year Table	Denotes the <u>Earliest</u> Fiscal Year that a specific TAMCN may <u>end</u> a rotation program.	LOGBASES / SYSCOM	***
TAMCNT Table	Denotes the TAMCN, their respective Nomenclature and whether or not a specific TAMCN is scheduled to participate in a Rotation Program during the current POM cycle years.	LOGBASES	Quarterly
Unserviceable Returns	Denotes the number of Unserviceable Returns by Fiscal Year, Force, and TAMCN with respective nomenclature.	LOGBASES	***
Value	Denotes the War Fighting value by TAMCN.	HQMC	***
War Materiel Req	Denotes the number of War Materiel Requirements (AAO) by TAMCN, Force and Fiscal Year.	LOGBASES	Quarterly
Year	Denotes the Fiscal Year and its associated Monetary Inflation Value. This factor is used to adjust the dollars spent on Depot repairs and rebuilds.	MATCOM	***

\*\*\* As required

### III. DEPOT LEVEL SOURCE OF REPAIR

**3.0 Introduction.** The Depot Level Source of Repair (DLSOR) decision process is a mandatory activity in logistics support planning for items (and subcomponents) that will require depot level maintenance. This process will take place following the development of the Maintenance Concept and the Mission Needs Statement (MNS) and prior to the completion of the Maintenance Plan.

The DLSOR decision process will achieve the most economical/efficient solution to the DLSOR challenge considering the needs and risks to the warfighter while at the same time complying with congressional statutes. The DLSOR decision process allows for the assessment of a variety of potential sources of depot level repair and assures the selection of the desired source which best fits into the overall Marine Corps depot level maintenance strategy. The Marine Corps source decision is then submitted through the existing Joint Depot Maintenance Activity Group (JDMAG) Depot Source of Repair (DSOR) process.

The following policies contain elements essential in making a source of repair decision:

- a. Title 10 U.S.C. - Sections 2460, 2464, 2466, 2469, 2470, 2474
- b. MCO 4790.10B
- c. MCO 4000.56
- e. DOD 5000.2R
- f. MCO 4200.33

#### 3.1 DLSOR Process

The DLSOR decision process consists of the following four elements:

- Determine the need for a risk assessment
- Gather/evaluate assessment data
- Determine overall risk assessment recommendation
- Maintenance Interservice Support Management Office (MI SMO) level assessment

Figure 1 depicts the DLSOR process that identifies who has the lead in Blocks A1 through A4. Each block has a series of steps in the process that is further explained.

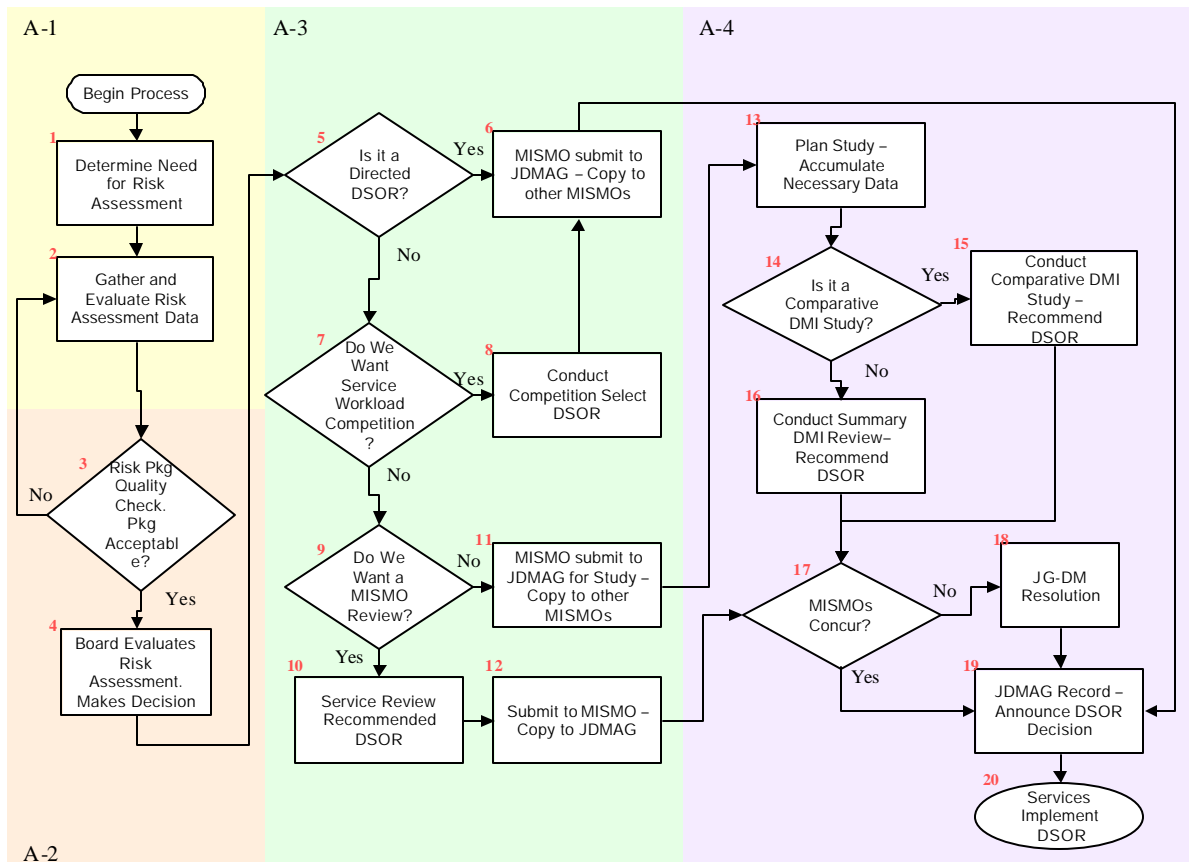


Figure 1

### Block A1 - Lead: Program Managers

**Step 1:** DETERMINE NEED FOR RISK ASSESSMENT. The steps within this process are a series of questions to be asked about the weapon system or ground support equipment for which the Depot Level Source of Repair decision is being considered. The questions are:

a. Does this system, subsystem or component require Depot Level Maintenance? All weapon systems, end items, systems, subsystems, equipment, or components, whether single-service or jointly managed, which require depot level maintenance and meet any of the following criteria shall be submitted through the DLSOR process:

a. New acquisition, including modification to fielded systems, subsystems or components regardless of the investment required.

b. Existing depot repair programs planned for transition from contract to organic support or from organic to contractor support, regardless of the investment required or the value of the program.

c. Existing interservice depot repair program relationships planned for termination, regardless of reason, investment/cost required, or the value of the program.



d. Existing depot repair programs for which a planned expansion of capability requires an additional capital expenditure of \$250,000 or more.

b. Is this item (including subcomponents) a potential replacement for an item on the Joint Chiefs of Staff (JCS) Requirements List? Refer to MCO 4000.56 dated 9 Jun 00 for further details.

c. Is this item Acquisition Category (ACAT) I or II?

d. Is this item considered to be Low Density? A Low Density Item is defined as a regulated/controlled item requiring special management attention due to extremely small quantities, complexity or high operational availability requirements. Low-density items are: end items, insurance items, secondary reparables, or criticality code 1 repair parts.

e. Is this item undergoing a major modification (via Product Improvement Program (PIP) or Service Life Extension Program (SLEP))?

If the answer to any of the above questions is "Yes", then a Risk Assessment is required. If the Marine Corps is not the lead service for the source of repair decision, then a copy of the assessment will be obtained from the lead service. Go to Step 2. Note: A Directed Depot Source of Repair (DSOR) is an exception to this requirement. A letter will be prepared citing the directive and forwarded to the Board. Go to Step 4.

**Step 2: GATHER/EVALUATE RISK ASSESSMENT DATA.** There are several steps in this particular process. It is the most significant stage of the decision process. The selection of the Depot Level Source of Repair most advantageous to the Marine Corps will depend on the collection of meaningful data and careful analysis of that data.

MARCORSYSCOM PMs are responsible for the life cycle support of assigned weapon systems and have several tools available to assist in decisions affecting equipment maintenance and sustainment. PMs use the Logistics Support Analysis (LSA) process to determine maintenance procedures and the associated Integrated Logistics Support. A Failure Mode Effects and Criticality Analysis (FMECA) is performed to identify failure modes, criticality of the failure mode, and possible preventive maintenance activities. A Level of Repair Analysis (LORA) and Reliability Centered Maintenance Allowance (RCM) are then performed to determine if and at what maintenance level, preventive and corrective maintenance actions will be performed. This is the PMs Maintenance Plan (MP). The Maintenance Plan is the major driver of equipment reliability and the plan is based on assumptions of cost and depot maintenance capabilities required. As such, the plan will play a significant role in the recommendation.

In addition to the development of the MP there are additional steps to assure the optimal mix of available capabilities on which to base the source of repair recommendation. The steps are as follows:

a. Determine the number of potential sources of Maintenance Support. Using a FedBizOps Sources Sought Announcement (or similar method) obtain and list the names and addresses of potential sources, both commercial and organic, who repairs same/similar equipment. In the announcement, cite the Marine Corps desire to develop long-term partnerships with private industry and other public agencies.

b. The next step is to determine the actual work that will be required to provide depot level maintenance support to the item. This is broken out into two areas of concern: capability and capacity. Capability is the skills, equipment and facilities required to perform the maintenance requirements. Capacity is the amount of workload that the repair source can effectively produce annually. A repair source may have the required capability but not the required capacity. Partnering offers an opportunity to bolster an otherwise superior source with the addition of a partner to pick up the lacking element.

1. In order to determine the capability required of a source to provide maintenance support, develop a Work Breakdown Structure (WBS) citing the primary tasks, skills and equipment required for the item. A sample WBS follows:

<b>Production Control Center (PCC)</b> <b>Labor Rate includes:</b>  <b>Direct Labor</b>  <b>Production</b>  <b>General &amp; Administrative</b>  <b>Surcharge</b>	<b>Work Breakdown and PCC/CWC Labor Rate Integration</b>									
	Level 2	Level 3	Level 4	Level 5	Level 6	PCC				
	1.01.01	Hull / Frame					Hours	Rate	Labor Cost	
		1.01.01.01	Hatches/Ramp				Roll Up	337.1		\$20,600.77
<b>Material is billed as actual</b>				Disassemble/Assemble/Artisan Inspection			730	35.2	\$57.77	\$2,033.50
				Sheet Metal			740	0.3	\$62.52	\$16.76
				Welding			740	2	\$62.52	\$125.04
				Machine			740	5	\$62.52	\$312.60
<b>Every PCC has its own rate</b>				Clean/Steam/Blast			740	7.5	\$62.52	\$468.90
				Paint			740	5.5	\$62.52	\$343.06
		1.01.01.02	Miscellaneous Hull Components	Bolted on & Stowage						
					Disassemble/Assemble/Artisan Inspection		730	13.3	\$57.77	\$788.34
					Sheet Metal		740	15	\$62.52	\$837.60
					Welding		740	15.5	\$62.52	\$869.06
					Machine		740	6.5	\$62.52	\$511.42
					Clean/Steam/Blast		740	8	\$62.52	\$800.16
					Anodizing		730	0.2	\$57.77	\$11.56
					Paint		740	15	\$62.52	\$837.60
		1.01.01.03	Plenum							
				Disassemble/Assemble/Artisan Inspection			730	38.4	\$57.77	\$1,640.67
				Hydraulic			730	2	\$57.77	\$115.54
				Sheet Metal			740	0.5	\$62.52	\$31.26
				Welding			740	5	\$62.52	\$312.60
				Machine			740	9	\$62.52	\$862.68
				Clean/Steam/Blast			740	2.1	\$62.52	\$131.28
				Paint			740	2	\$62.52	\$125.04
		1.01.01.04	Hull							
				Receiving from UDLP			730	4	\$57.77	\$231.08
				Sheet Metal			740	0.1	\$62.52	\$6.25
				Welding			740	38	\$62.52	\$2,375.76
				Machine/Tapping						
							730	0	\$57.77	\$0.00
							740	60	\$62.52	\$3,126.00
				Clean/Steam/Blast			740	25	\$62.52	\$1,563.00
				Paint			740	40	\$62.52	\$2,500.80
	PCC	Labor Rate								
	-30	\$57.77								
	-40	\$62.52								
	-50	\$63.89								
	630	\$40.03								

2. Capacity is required to be determined for both peacetime and surge/regeneration. Determine the peacetime rate as the average number of items to be processed through the repair source annually. Determine the surge/regeneration composite rate by

multiplying a standard factor of 1.6 by the average number of items to be processed through the repair source annually (e.g. 15 trucks is the annual repair requirement multiplied by 1.6 equals an annual surge/regeneration requirement of 24 trucks). The ratio of DPG/JCS scenario requirements to total inventory must be determined. What is the number of units required to support the DPG/JCS scenario compared to the total inventory quantity?

c. Each of the sources listed in Step 2 a. must be surveyed to obtain quantitative and qualitative information concerning the facilities, equipment and skills each source has available and how their capability translates to supporting the workload requirements as identified in b.1.

1. Each source must respond listing the capabilities they have to satisfy the requirement or the cost to acquire said capabilities. Again the emphasis is on quantitative and qualitative data. If a partnership is being considered, it is not necessary that the potential source have all the capabilities, but the quality of the capabilities is a factor.

2. The capacity/throughput of each source must be obtained for all three rates (peacetime, surge and regeneration).

3. Information regarding the sources past performance is invaluable. The source should provide recent and relevant performance data on previous depot level maintenance support, including indicators such as: quality, timeliness, schedule, operational effectiveness and suitability. Pertinent litigation issues should also be included.

4. What is the potential value of our workload in the market place compared to the total demand? Is this work considered significant to the service provider as far as volume or number of units involved? And what is the potential value of this workload to the service provider 10-20 years down the road?

5. Lastly, what is the organic contingency plan should the contractor fail to meet Marine Corps needs?

d. Once all the pertinent data has been assembled, a Best Value Analysis is conducted.

e. The analysis having been completed, the Risk Assessment Recommendation will be prepared using the following guidelines:

- Minimum Criteria for Risk Assessment
  - Number of Potential Sources:
    - From a market survey/capability analysis, list the name and addresses of potential sources, which repair same/like type equipment.
  - Capability:
    - Summarize the workload requirements.

- Summarize the facilities, equipment, skills, and technical data these sources have available and how their capability directly translates to supporting the workload.
- Evaluate the possible partnerships to mix superior capabilities of both organic and private industry
- Surge Rate
  - How does the maintenance requirement of this item increase in the event of a contingency?
  - Must consider Pre-Deployment, Deployment, Combat Operations, and Reconstitution.
  - Determined from an engineering estimate and historical data or usage data *if available*.
  - Additional information may be available from the planners at PP&O, MCCDC, Maintenance Directorate, or using an industry average utilization rate.
- Capacity
  - What is the production capability or through put of these commercial sources to accomplish the required workload?
    - In Peacetime
    - Surge/Reconstitution
  - Can a capacity issue in an otherwise superior source be remedied by partnering?
- Ratio of DPG/JCS scenario requirements to inventory
  - What is the ratio of the numbers of units required to support the DPG/JCS scenario requirement to the total inventory?
- Potential sources' recent and relevant past performance for Depot Level Repair
  - Measured by such indicators as quality, timeliness, schedule, operational effectiveness, suitability, and pertinent litigation issues.
- What is the potential value of our workload in the market place compared to total demand?

- Is this workload considered significant to the contractor as far as volume or number of units involved?
  - What is the potential value of this workload to a contractor 10-20 years down the road?
- What is your recommendation to ensure a ready and controlled source of depot level maintenance for the entire life cycle of this item?
- What is your organic contingency plan in the event of contractor default?

The complete package will include the following:

- An Executive Summary of the overall recommendation.
  - Specific source of repair desired
    - Partnership (best mix of organic and commercial capabilities)
    - Marine Corps organic
    - Other service organic
    - Commercial
  - Source of repair is predetermined by legislative action or DoD decision (supporting documentation is required)
  - Marine Corps has no preference for a specific source and desires:
    - a competition or
    - a JDMAG study
- Supporting arguments for the recommended source of repair.
- A copy of the original Capability and Capacity requirements, e.g.: the WBS.
- A copy of the raw data gathered from the potential sources.
- A description of the analysis procedures used and the results of the analysis.
- Estimated costs relating to providing maintenance support, i.e. facilities, TMDE, training, etc....
- The contingency plan

f. Submit the completed recommendation package to the MATCOM Investment Advisor Board as soon as possible in the acquisition process prior to exiting milestone B. Go to Step 3.

**Block A2 - Lead: MARCORMATCOM Investment Advisor Board**

**Step 3:** RISK ASSESSMENT PACKAGE QUALITY CHECK - IS THE PACKAGE ACCEPTABLE. The Risk Assessment package is received at MARCORMATCOM HQ and reviewed for completeness and data quality. Packages determined to be incomplete or inadequate for the Board's purpose of recommendation consideration will be returned to the Program Manager for additional data. Return to Step 2. Packages meeting the data requirements will be forwarded to the Board for recommendation consideration and decision. Go to Step 4.

**Step 4:** BOARD EVALUATES RISK ASSESSMENT - MAKES DECISION. The MATCOM Investment Advisor Board will meet on an as required basis to consider Risk Assessment Recommendations. The Board will review submitted recommendations with consideration given to Title 10 requirements, 50/50, CORE capability requirements, mission and other factors external to the Program Managers concern. While the PM is primarily concerned with cost, schedule and performance issues surrounding his unique item, the Board is concerned at a corporate level with determining best value for the Marine Corps concerning all weapon systems, ground support equipment and software while adhering to legislative requirements. Subject matter experts may be called on occasion to clarify points of discussion. The Board will make a decision on the recommendation. The board's decision, be it organic, commercial or a partnership, is passed to the Maintenance Interservice Support Management Officer (MISMO) who will forward to the other Service MISMOs for a MISMO review. If the source of repair is predetermined or the Board opts for a competition or a study the task will be passed to the MISMO for appropriate action.

The joint service depot maintenance community supports four methods to determine a source of repair and the board's decision will fit into one of the four categories. The four methods are:

1. A Directed Depot Source of Repair (the source of repair is predetermined as a result legislative factors or DoD level decision)
2. A Service Workload Competition (The Marine Corps has no preference for the source of repair and desires a competition (bids) to seek the source of repair that provides the best value.)
3. A Depot Maintenance Interservice (DMI) review (The Marine Corps wishes that JDMAG conduct a study to determine the best value source of repair, this is the most expensive and least used source determination process)
4. A MISMO Review (the Marine Corps has a recommendation for the source of repair and it is submitted to the other service MISMOs to concur or nonconcur, in the event of a non concurrence, the decision will revert to a Service Workload Competition or a DMI review (non concurrence is a rare event)).

Details of each will be discussed in the following paragraphs. The results of the Board decision will be forwarded to DC/S I&L (LPC-2) and remaining stakeholders. Go to step 5.

### **Block A3: - Lead: MARCORLOGBASES MI SMO**

**Step 5:** IS IT A DIRECTED DSOR? This review accommodates DSOR assignments, to either contract or organic sources, resulting from decisions made at a level of authority higher than the introducing Service logistics commander that preclude any alternative assignment. Examples include Department of Defense programs, State Department agreements, or decisions resulting from public law. A specific example is Air Force One; Congress has specified the source of repair for the President's plane. Such workloads shall be identified and appropriate documentation submitted to the JDMAG for recording and announcement of the joint Service decision. If it is a directed DSOR, go to Step 6. If not, go to step 7.

**Step 6:** MI SMO SUBMIT TO JDMAG – COPY TO OTHER MI SMOS. The MI SMO submits a letter to JDMAG directing the source of repair with a copy to other MI SMOS. Go to Step 19.

**Step 7:** DO WE WANT SERVICE WORKLOAD COMPETITION? The requiring Service elects to execute a public-private or public-public competition via formal contracting solicitation process, which results in a DSOR assignment. Interested Services may nominate one candidate depot. The Cost Comparability Handbook is used to level the playing field among public and private bidders. If we elect competition, go to Step 8. If do not, go to Step 9.

**Step 8:** CONDUCT COMPETITION – SELECT DSOR. The results of this competition shall be submitted to the JDMAG, with appropriate documentation. Return to Step 6.

**Step 9:** DO WE WANT A MI SMO REVIEW? This method is used for unique workloads, modifications to existing workloads, or small dollar investments. The MI SMO review is the simplest form of DMI and accommodates the need for a quick decision. The introducing Service MI SMO documents reasons for the MI SMO Review and why there is no benefit for JDMAG to conduct a DMI Study. This option is used when the Marine Corps has a proposed source of repair, this proposed source of repair maybe organic, contractor or a partnership combining both public and private sources. The alternative to a MI SMO review is a JDMAG DMI Study. If a MI SMO review is desired,, go to Step 10. If not, go to step 11.

**Step 10:** SERVICE REVIEW RECOMMENDED DSOR. It is determined that our best course of action is to request a review of our proposed repair source by all service MI SMOS. This would eliminate the cost and delay of a study. Go to Step 12.

**Step 11:** MI SMO SUBMIT TO JDMAG FOR STUDY – COPY TO OTHER MI SMOS. The introducing Service submits introductory JLC forms to JDMAG for formal DMI Review. The level of study (summary or comparative) depends on size and complexity of the weapon system and number of using Services. The introducing MI SMO may include Service special requirements in the documentation. For example, the MI SMO may stipulate that the Marine Corps intends to retain the depot level capability in the MCs to support the Expeditionary Logistics mission of direct support to

the Operating Forces. This mission utilizes the logistics strategy of maintaining multi-commodity support on each coast. The MI SMO submits a copy to other MI SMOs. Go to Step 13.

**Step 12:** MI SMO SUBMIT TO OTHER MI SMOS – COPY TO JDMAG. The MI SMO submits a request for review to other MI SMOs with a copy to JDMAG. Go to Step 17.

#### **Block A4 – Lead: Joint Depot Maintenance Activity Group (JDMAG)**

**Step 13:** PLAN STUDY – ACCUMULATE NECESSARY DATA. In accordance with its internal processes, the JDMAG will review introductory data and plan the DMI study. During study planning, JDMAG determines if the introduction warrants a *summary* or *comparative* study and requests the technical and program information necessary to conduct the level of study indicated. Also during study planning, JDMAG requests candidate depot nominations, as appropriate, from the Services. Go to Step 14.

**Step 14:** IS IT A COMPARATIVE STUDY? If the answer is yes, go to Step 15. If the answer is no, the alternative is a Summary Review, go to Step 16.

**Step 15:** CONDUCT COMPARATIVE DMI STUDY – RECOMMEND DSOR. The comparative study is used when there is significant investment, significant workload, multiple users, or multiple Service candidate depots for workload assignment. The comparative study methodology provides a basis for comparison of recurring repair costs and nonrecurring organic depot facility, equipment and training costs to establish a capability. When the study is completed, go to Step 17.

**Step 16:** CONDUCT SUMMARY DMI REVIEW – RECOMMEND DSOR. The summary study is used for small investment, low-volume workload items or those items where there is an obvious depot assignment based on known capabilities or other considerations. Planned depot support by commercial sources is also reviewed under the summary study process. When the study is completed, go to Step 17.

**Step 17:** MI SMOS CONCUR? The DSOR recommendation is provided to the MI SMOs for concurrence. If the MI SMOs concur, go to Step 19. If the MI SMOs do not concur, go to step 18.

**Step 18:** JG-DM RESOLUTION. In the cases where concurrences from all Service MI SMOs cannot be obtained on a DSOR recommendation and additional coordination by JDMAG does not result in agreement, JDMAG will refer the study to the Joint Group - Depot Maintenance for resolution. Upon resolution by the JG-DM, go to Step 19.

**Step 19:** JDMAG RECORD – ANNOUNCE DSOR DECISION. JDMAG will record and announce the DSOR assignment decision. Go to Step 20.

**Step 20:** SERVICES IMPLEMENT DSOR. The Service(s) will implement the DSOR assignment decision.

### **3.2 Responsibilities**



a. Headquarters Marine Corps, Deputy Chief of Staff for Installations and Logistics (DC/S I &L):

(1) Maintain this directive to reflect current policy.

(2) Reviews DLSOR input provided by COMMARCORMATCOM and forwards relevant information to DoD as required.

b. Commander, Marine Corps Materiel Command (COMMARCORMATCOM):

(1) Establishes the Investment Advisor Board to accept or reject the recommendation made by the Program Managers (Block A2 of figure 1).

(2) Conducts/directs analysis of corporate level impacts on the policies identified in paragraph 3.a. (2)(b) above.

(3) Forwards approved recommendation to the Maintenance Interservice Support Management Office (MISMO) for action.

(4) Maintains the implementing procedures, cited in the enclosure.

(5) Provides results of DLSOR Decision Process to DC/S I &L (LPC-2) and remaining stakeholders.

c. Commander, Marine Corps Systems Command (COMMARCORSYSCOM):

(1) Program Managers determine need for a risk assessment (Block A1 in figure 1).

(2) Gathers/evaluates risk assessment data (Block A1 in figure 1).

(3) Conducts Best Value Analysis (Block A1 of figure 1).

(4) Submits the DLSOR recommendation package to the Investment Advisor Board as soon as possible in the acquisition process prior to exiting milestone B.

(5) Provides a representative to the MARCORMATCOM Investment Advisor Board.

d. Commander, Marine Corps Logistics Bases (COMMARCORLOGBASES):

(1) Provide risk assessment data concerning the Marine Corps depots to the Program Manager.

(2) Implement and manage the Joint Depot Maintenance Program by conducting the depot source of repair assignments in accordance with reference (a) (Block A3 of figure 1).

(3) Conducts the DSOR assignment and implementation from a competition (Block A4 of figure 1).

(4) Provides a representative to the MARCORMATCOM Investment Advisor Board.

### **3.3 Public-Private Partnerships (This section will grow as policy is established)**

A Public-private partnership is only one option for sourcing depot maintenance workload. The Deputy Under Secretary of Defense for Logistics and Materiel Readiness directs the Military Departments to pursue such partnerships to strengthen the Department of Defense depot maintenance operations. Depot operations can benefit from public-private partnerships that combine the best of commercial processes and practices with the Department's own-extensive maintenance capabilities. It is the mutual interests of both sectors to aggressively pursue the establishment and effective operation of strong partnerships across the widest possible segment of our workload requirements between the Marine Corps and our contractor counterparts early in the acquisition life cycle. The information that follows provides specific policy on public-private partnerships for depot maintenance.

It is DoD policy to use public-private partnerships for depot maintenance. In particular, the Military Departments shall shape partnership agreements to support DoD and Defense-related workloads. Partnerships can improve the utilization of DoD facilities, equipment, and personnel. Partnerships can bring a wide variety of additional benefits to the parties involved in the agreement, and also foster improved support to the war fighter.

Each Military Department shall designate its depot maintenance activities as CITEs in the recognized core competencies of the respective activities. Depot maintenance public-private partnerships shall be formed principally around these identified core competencies. In establishing public-private partnerships involving DoD depot maintenance activities, the Military Departments shall ensure their partnerships comply with applicable statutory and regulatory requirements. Sales of goods or services, and/or leases of facilities or equipment must be based on specific statutory authority. Additionally:

- An organic depot maintenance activity will not compete with the commercial sector in the sale of articles and services that are not DoD or Defense-related unless specifically authorized by law.
- Organic depot maintenance resources (facilities, equipment, and workforce) may be made available to partnerships to the extent that the resources are not required for DoD production requirements and the arrangement will have no adverse impact on the organic activity. Resources may be made available on a variety of terms, including use on a non-interference basis or full-time lease.
- Organic depot maintenance capabilities (e.g., facilities, equipment, etc.) may be employed in all forms of partnerships. However, when a portion of the organic depot maintenance workforce is used to support a partnership, the organic workforce must be engaged in work that is DoD or Defense-related. Defense-related work includes sales under

foreign military sales agreements; direct sales to friendly countries; manufacture or repair of components or subcomponents within a larger Defense contract; work to support other authorized customers of the DoD wholesale supply system; joint DoD/commercial requirements (to the extent that commercial requirements do not impact DoD production); competitively-awarded contracts in support of other Federal agencies as authorized by 10 U.S.C. 2470; and work that advances the objectives of a CITE in its core competencies as authorized by 10 U.S.C. 2474(b). This restriction on the type of work to be performed does not apply to leases of organic depot maintenance capabilities exclusive of labor (e.g., facilities, equipment, etc.).

- Organic depot maintenance activities entering into public-private partnerships will ensure, when authorized by law, and consistent with the DoD Financial Management Regulation (DoD 7000.14-R), that related reimbursements from the private sector accrue directly to the activity involved in the partnership or providing the support. Activities participating in partnerships will separately track and report financial results by establishing and maintaining separate cost accounting job orders or cost/revenue pools, and operating results. Further, in entering into a partnership, the public sector partner shall ensure that the Government is properly indemnified against liability stemming from the partnership.
- In general, an organic depot may not increase its organic capacity solely to support a partnership. This limitation does not apply to increases that are necessary to support DoD requirements. However, organic facility construction and alterations may take partnership arrangements into consideration if the arrangements will provide best value or improve support to the war fighter. Where possible, partnerships should be structured in ways that encourage and justify private sector capital investment at the organic activity. In particular, this may involve multi-year arrangements.

### *Applicability*

This policy applies to organic (DoD in-house) depot maintenance activities (see definition paragraph 3.3.1) of the Department of Defense.

### *Objectives*

Public-private partnerships can contribute to more effective DoD maintenance operations, the introduction of innovative processes or technology, and the economical sustainment of organic capabilities. Where possible, partnerships should be structured in ways that encourage and justify private sector capital investments at CITE activities. The decision to enter into a partnership must be supported by a business case analysis demonstrating that it is in the best interest of the government. Objectives of depot maintenance public-private partnerships include:

- providing more responsive, timely, and reliable product support to the war fighter
- sustaining parts availability to maintain workflow, reduce repair cycle times, and enhance readiness
- sustaining core capability

- reducing the cost of DoD products and services
- reducing or eliminating the DoD cost of ownership in areas such as operations and maintenance, and environmental remediation
- improving the use of available organic capacity
- leveraging private sector investments, such as facilities and equipment, to contribute to re-capitalization of depot maintenance activities
- enhancing the industrial base to improve and sustain manufacturing and repair capabilities both organically and within the private sector
- introducing improved business processes and updated technology to DoD depot maintenance operations and products
- promoting suitable private sector ventures at selected DoD depot activities
- fostering cooperation between DoD and private industry

All of these objectives must have as a principal focus improved support to depot maintenance customers (the war fighters) and/or enhanced operation and readiness of DoD weapon systems and equipment.

#### *Partnerships Defined*

A public-private partnership for depot maintenance is an agreement between an organic depot maintenance activity and one or more private industry or other entities to perform work or utilize facilities and equipment. Program offices, inventory control points, and materiel/systems/logistics commands may also be parties to such agreements or be designated to act on behalf of organic depot maintenance activities.

In general, depot maintenance public-private partnering arrangements include (but are not restricted to) one or more of the following forms:

- Use of public sector facilities, equipment, and employees to perform work or produce goods for the private sector under certain defined circumstances;
- Private sector use of public sector equipment and facilities to perform work for the public sector; and
- Work-sharing agreements, using both public and private sector facilities and/or employees.

#### *Basis for Partnerships*

Partnership arrangements must identify the statutory or regulatory authority for the specific undertaking, e.g., if there is a sale or lease involved.

Among the various authorities, an important basis for establishing depot maintenance public-private partnerships is found in 10 U.S.C. 2474, which outlines provisions for designating DoD depot maintenance activities as Centers of Industrial and Technical Excellence (CITEs) in their core competencies. In designating CITEs, the Secretaries of the Military Departments shall also encourage each Center to enter into public-private partnerships comprising its own employees, private industry, or other entities to perform work within its core competencies, and allow private

industry to lease or use under utilized or unutilized facilities and equipment at the CITE. Such public-private partnerships should contribute to the implementation of best business practices and improvement of operations in their core competencies.

Other sections of title 10, such as 10 U.S.C. 2563 and 10 U.S.C. 2208, and regulatory guidance, including the Federal Acquisition Regulation, are applicable to depot maintenance public-private partnerships. There are a number of forms such partnerships can take. In establishing depot maintenance public-private partnerships, whatever the form, the Military Departments shall ensure compliance with all applicable statutory provisions and regulatory guidance. A summary of statutory and regulatory provisions that are frequently cited to implement partnerships is attached.

The scope of work to be supported with a partnership can range from simple facility leases of DoD property to in-depth product support. The workforce can be totally separate, or engaged in a more complex workshare with process-specific workload sharing, or fully integrated in a single production facility. Partnerships can range from joint public-private undertakings, to private sector participation in some aspect of DoD depot maintenance production, to direct sales of articles or services to the private sector, or to leasing of DoD facilities or equipment. Public-private partnerships have flexible characteristics; each partnership should reflect the unique objectives that are the basis of the partnership as well as the particular needs of the partners and the resources to be shared. The key element in each of these arrangements is the utilization of some aspect of organic depot maintenance capability to support the partnership.

#### *Relationship to Other Logistics Considerations*

Depot maintenance partnerships can be an effective tool to implement Performance-Based Logistics (PBL) arrangements. PBL implementation strategies will consider partnering with CITEs to satisfy the requirements of 10 U.S.C. 2464 and 10 U.S.C. 2466. Incorporation of detailed performance metrics, and financial and other incentives into such partnering agreements should be used to establish successful long-term PBL partnership arrangements.

Depot maintenance partnerships may be a component of broader partnering agreements between the private sector and the Government. This policy is intended to apply to the depot maintenance aspects of such partnerships.

Defense Logistics Agency (DLA) distribution depots co-located with depot maintenance activities and DLA/Military Department logistics activities managing materiel provided to depot maintenance activities may be impacted by a depot maintenance public-private partnership. These supporting elements need to be invited to participate in the planning for depot maintenance partnerships as appropriate.

### **3.3.1 Public-private Partnering Definitions**

*Depot-level maintenance (also known as depot maintenance):* The processes of materiel maintenance or repair involving the overhaul, upgrading, or rebuilding of end items, parts, assemblies, or subassemblies, and the testing and reclamation of such equipment as necessary

(regardless of the source of funds for the maintenance or repair and irrespective of the location at which the maintenance is performed). Depot maintenance includes all aspects of software maintenance as well as interim contractor support or contractor logistics support (or any similar contract support), to the extent that such support is for the performance of the maintenance or repair outlined above. Depot maintenance includes the installation of parts for modifications; it does not include the procurement of major modifications or upgrades to improve weapon system performance or the parts for safety modifications. Depot maintenance also does not include nuclear aircraft carrier refueling.

*Depot-level maintenance activity:* A specific DoD-owned and -operated facility established, equipped, and staffed to carry out depot-level maintenance. DoD depot-level maintenance activities accomplish a wide range of depot-level maintenance processes including overhaul, conversion, activation, inactivation, renovation, analytical rework, repair, modifications and upgrades, inspection, manufacturing, reclamation, storage, software support, calibration, and technical assistance. Field-level maintenance sites authorized to accomplish a specific depot-level repair or a narrow range of such repairs or maintenance are not depot-level maintenance activities.

*Core competencies:* Those core logistics-related depot-level maintenance capabilities that serve as the Department's necessary ready and controlled source of technical ability, expertise, and resources. Core competencies are the set of depot-level maintenance capabilities necessary to enable the armed forces to fulfill the strategic and contingency plans prepared by the Joint Chiefs of Staff and for which the Military Departments believe the DoD should be a recognized leader in the national technology and industrial base. Core competencies ensure that DoD depot-level maintenance activities are prepared to and actually do execute depot-level maintenance in an effective, efficient, and timely manner.

*Performance-Based Logistics (PBL):* An integrated acquisition and logistics process for buying weapon system capability that delineates outcome performance goals of weapon systems, ensures that responsibilities are assigned, provides incentives for attaining these goals, and facilitates the overall life-cycle management of system reliability, supportability, and total ownership costs. Depot-level maintenance may be a part of life-cycle management requirements.

*Public-Private Partnership:* A public-private partnership for depot maintenance is an agreement between an organic depot maintenance activity (or its agent) and one or more private industry or other entities to perform work or utilize facilities and equipment. Program offices, inventory control points, and materiel/systems/logistics commands may also be parties to such agreements or be designated to act on behalf of organic depot maintenance activities.

*Teaming:* An arrangement whereby an organic activity and a commercial entity enter into a contractual relationship to accomplish one or more deliverables stipulated in a contract. The relationship between the participants is usually initially outlined in a teaming agreement during proposal preparation and then formalized as a contractor/subcontractor relationship subsequent to contract award.

*Workshare:* An arrangement whereby a combination of organic and commercial facilities and/or employees are used to execute the requiring activity's work package; the requiring

activity issues a work order to the organic participant and a contract to the private sector participant. The relationship between the participants to accomplish the work package is usually coordinated with a Memorandum of Understanding or Memorandum of Agreement.

### 3.3.2 Statutory and Regulatory Provisions Relevant to Depot Maintenance Partnerships

(Not an exhaustive list of such provisions, nor a complete summary of the content of each provision – descriptions focus only on primary aspects of each that apply or are relevant to depot maintenance)

Authority	Thumbnail Description – Not Exhaustive
10 U.S.C. 2208(j)	Permits depot financed through working capital funds to <i>sell articles and services</i> outside DoD if the purchaser is fulfilling a DoD contract and the contract is awarded pursuant to a public-private competition.
10 U.S.C. 2469a	Requires competitive contracting (and authorizes public-private competition and teaming) when outsourcing workloads formerly performed at depots that have been closed or realigned ( <i>BRAC</i> ).
10 U.S.C. 2474	Requires the Military Departments to designate depot maintenance activities as Centers of Industrial and Technical Excellence ( <i>CITEs</i> ), authorizes and encourages public-private partnerships, permits performance of work related to core competencies, permits use of facilities and equipment, and permits <i>sales proceeds</i> from public-private partnerships to be credited to depot accounts.
10 U.S.C. 2563 (formerly 10 U.S.C. 2553)	Authorizes <i>sale of articles or services</i> outside DoD (excluding those authorized under 10 U.S.C. 4543) under specified conditions.
10 U.S.C. 2667	Allows <i>leasing</i> of non-excess facilities and equipment.
10 U.S.C. 4543	Authorizes <i>Army</i> industrial facilities that manufacture cannons, gun mounts, etc., to <i>sell articles or services</i> outside DoD under specified conditions.
10 U.S.C. 7300	Authorizes <i>Naval</i> shipyard <i>sales of articles or services</i> to private shipyards for fulfillment of contracts for nuclear ships.
22 U.S.C. 2754	Allows <i>sales or lease of articles or services to friendly countries</i> under specified conditions.
22 U.S.C. 2770	Allows <i>sales of articles and services</i> to a U.S. company for incorporation into end items to be sold to a friendly foreign country or international organization under specific conditions.
FAR 45.3	Provision of <i>government-furnished material, facilities and equipment</i> to contractors.

## **IV. PLANNING, PROGRAMMING AND BUDGETING SYSTEM (PPBS)**

### **4.0 Introduction**

This section provides a very brief overview of the PPBS as it pertains to program requirements for appropriated funds. This section is not intended to be a tutorial on the PPBS, but rather to provide a baseline for discussing how the depot maintenance program is treated and relates to the PPBS process. With regards to depot maintenance, O&MMC/O&MMCR is the appropriation which funds the majority of the Marine Corps depot workload. The Maintenance Center's new orders, which are comprised of a mixture of appropriated and WCF sources, provide the funds required to finance the operating costs of the Maintenance Centers.

### **4.1 Planning**

Planning is the first phase of PPBS. Planning considers the threat to national security and develops a strategy to deal with the threat. This strategy forms the basis for the Defense Planning Guidance (DPG). The DPG provides fiscally constrained guidance on policy, strategy, force planning, and resource planning for all DoD organizations. The DPG links the Planning and Programming phases and serves as the yardstick for making programming and budgeting decisions. Components develop their program proposals in accordance with the DPG while Office of the Secretary of Defense (OSD) and the Joint Staff use it as the baseline for program review. The issuance of the SecNav Guidance and CMC Guidance marks the beginning of the second phase, Programming.

### **4.2 Programming**

Programming addresses policies and guidance issued during the planning phase and translates the DPG, SecNav Guidance, CMC Guidance and Fiscal Guidance into dollars, forces, and manpower. The first phase of POM development is referred to as Program Planning. By the time this phase is over, we have a POM development plan, - guidance, - and a "core" program set aside and removed from competition in the even years only. In odd years a core funding analysis is not required; however, changes to program requirements should be identified. Since the POM ultimately reflects the priorities of the Commandant, it needs to incorporate the portions of his Programming Guidance that affected the resource allocation process. For example, the Commandant made two decisions for POM 02. One was the formal designation of an advocate at Headquarters Marine Corps for each element of the MAGTF. The second established the Marine Requirements Oversight Council (MROC). The last element accomplished during the initial programming phase is setting the "core" funding for the POM. The core is simply the summation of the funding decisions that the Marine Corps do not want or need to revisit. In other words, funding is set aside to support program decisions. The remaining balance left after the cores were funded is referred to as "discretionary" funds.

The Service components document their detailed resource requirements, based on the guidance, in their POM. In the case of depot maintenance, warfighting capabilities are linked with mission needs when determining requirements. The POM is the cornerstone of the Programming phase of the PPBS as it identifies total program requirements for the next six years. The DLMP



Requirements Determination process for the Operation and Maintenance, Marine Corps (O&MMC/O&MMCR) appropriation is the cornerstone during the POM process. The POM submissions are developed, presented, and justified throughout the Marine Corps POM process. The depot maintenance justifications include the impact to warfighting capability and to readiness. The primary purpose of the POM process is to ensure Marine Corps resources are stratified against all valid programs, thereby ensuring the "most bang for the buck.". This process begins in early summer of the odd years and it determines a Marine Corps approved funding profile by program. The POMs are submitted to OSD in the spring of the even years and then reviewed by the Commanders-in-Chiefs, Joint Staff, OSD Staff, and the Office of Management and Budget (OMB) staff during the Summer Review. The Marine Corps POM is normally due at the end of May.

The Programming Phase is basically a competition between all of the numerous requests for part of the discretionary funds. During the POM process, we call the competing requests for discretionary resources "initiatives". Once the core was set and published, the task of developing and submitting initiatives commences throughout the Marine Corps. The cost to support all of the requests far exceeds the discretionary resources. It is not uncommon for over three fourths of the requests to remain unfunded. Due to the competition, it was necessary to implement a new DLMP requirements determination process that would better justify program requirements. The essence of the Marine Corps methodology for POM development is to generate the most benefit to the Marine Corps per dollar invested.

For an initiative to receive resources in a POM, it must first compete successfully within its own Program Evaluation Group (PEG). The PEG groups initiatives in logical categories such as manpower, infrastructure, and procurement, and evaluates them for benefit to the Marine Corps. PEG members were majors, lieutenant colonels, and civilian equivalents from the operating forces, the supporting establishment, and the Headquarters. The PEGs are focused on the benefit side of the benefit/cost equation. In fact, they could be instructed not to consider the cost of initiatives during prioritization and evaluation. The PEGs received briefs on their initiatives, reviewed all guidance, and considered the Advocate Requirements List (ARL). All PEGs were directed to deliver the same product: a prioritized list of initiatives with relative benefit values assigned and normalized on a scale of 0 to 100.

The different lists were then merged into an integrated list and forwarded to the POM Working Group (PWG) for benefit /cost analysis. For example, the nine investment lists were merged into a single investment list. What the PWG finally receives is seven prioritized benefit lists: Investment, Operation & Maintenance, Active Military Construction, Reserve Military Construction, Family Housing, Science and Technology, and Manpower. The PWG is composed of a cross section of lieutenant colonels, majors and civilians. When the PWG receives the output of the PEGs in early March. That signals the beginning of the four-week "endgame". During this final stretch of program development, the PWG clears up any remaining initiative questions, addresses Corporate Must-Fund Bills, addresses any late add to the program and then melds the PEG benefit lists into a single, integrated benefit list that includes all appropriations. The individual benefit value of each initiative is then divided by its cost. That process readjusted the order from the benefit-only version. However, this is only the starting point for the PWG. The science of programming is now complete. The PWG now switches to the art of programming as the list is adjusted based on their professional knowledge, judgment, and experience. This is where the

Marine Corps process excels, because it strives for the proper balance between objective information and subjective opinion. To be most effective, the process must allow both the “art” and the “science” to exist, but does not depend solely on either one. This product is called a Tentative Order to Buy (T-POM) because the PWG begins at the top and starts “spending” money until all dollars are gone. Sounds easy, but it takes approximately two weeks to balance the books.

The core and the PWG’s recommended Tentative Order Of Buy are briefed to the Program Review Group (PRG). The three-star level PRG evaluates the PWG’s efforts and identifies any “Heartburn” changes where appropriate. The Commandant and the senior leadership receive an advance look at the program at the Executive Offsite where the PRG’s issues are discussed. Based on the recommendations of the senior leadership, the Deputy Commandant for Programs and Resources presents the program to the Marine Requirements Oversight Council (MROC) chaired by the Assistant Commandant. The Commandant approves the MROC’s recommendations and forwards the POM to the Secretary of the Navy for inclusion in the Department of the Navy’s POM.

#### 4.3 Commandant's Priorities.

The Commandant sets his priorities and decides what to buy. For example, in POM 02, the maintenance of our aging equipment was a high priority and in the area of procurement, the Advance Amphibious Assault Vehicle (AAAV) was the Marine Corps' top ground weapon priority. In POM04 modernization was a priority and expending resources on legacy system upgrades was discouraged. Figure 4-1 below displays the POM process.

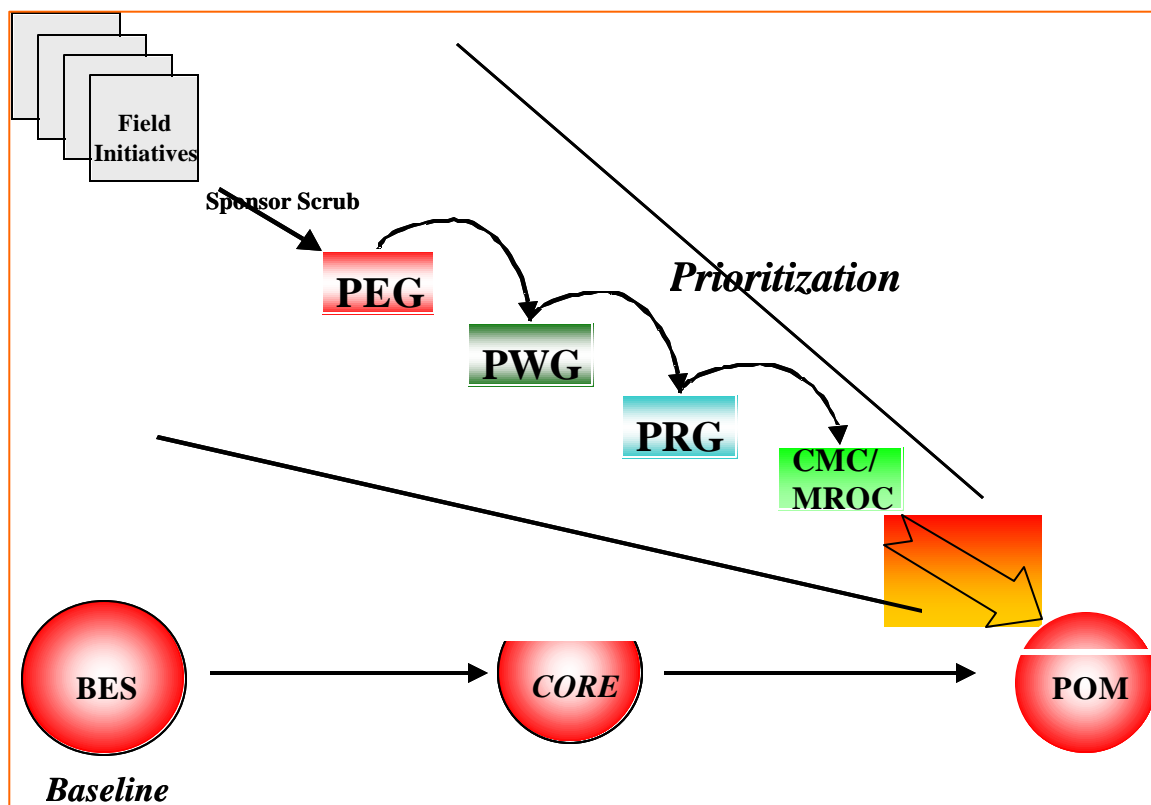


Figure 4-1

Figure 4-2 below briefly summarizes the responsibilities of each POM group.

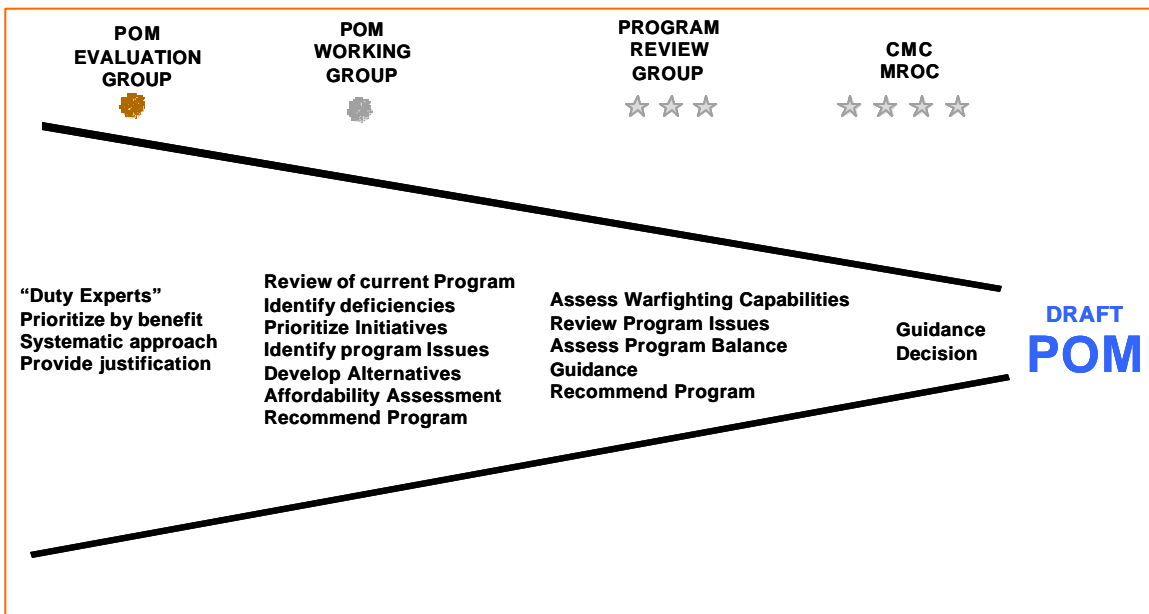


Figure 4-2

The POM is a resource plan that represents a snapshot in time. The POM has a short shelf life and multiple opportunities exist to change a decision. However, because requirements far exceed the resources available, the presentation and justification for depot maintenance requirements is crucial.

OSD prepares a consolidated POM from all Service components' POMs. This consolidated POM updates the DoD Future Years Defense Program (FYDP). The FYDP is the official database document for recording the total resources (forces, manpower, and dollars) programmed for the Defense Department. This ends the programming phase and begins the budgeting phase.

#### 4.4 Responsibilities

a. Commander, Marine Corps Materiel Command

- (1) Provides POM guidance to MARCORLOGBASES and MARCORSYSCOM.
- (2) Brief POM Groups - justify and defend DLMP requirements.

b. Commander, Marine Corps Logistics Bases.

- (1) Prepares the POM exhibit based a number of factors, including but not limited to: the requirements established at the Equipment Maintenance Conference, The POM core established by P&R, automated decision tools, and input from the stakeholders.

(2) Forwards the POM exhibit to MARCORMATCOM in accordance with established timelines.

(3) Forwards the Capital Purchases Program planning requirements to MARCORMATCOM in support of the NWCF - DMAG POM submission. This data is submitted in conjunction with the O&MMC/O&MMCR POM submission discussed on page 16 (step 7).

c. MARCORSYSCOM works with LOGBASES to prepare POM exhibits.

## V. BUDGETING - APPROPRIATED FUNDS

### 5.0 Introduction

During the *Budgeting* phase, DoD components translate the first two years of the approved POM into budgets. Budgeting entails two elements; a budget formulation (and justification) process and a budget execution process. The depot maintenance budget for both Active and Reserve forces identifies total depot level requirements by TAMCN and reflects the approved POM funding levels as well as the unfunded requirements or backlog. The primary purpose of the budget formulation process is to justify and obtain the financial resources from Congress for executing programs. The second element, budget execution, is the allocation, obligation, expenditure, and reporting of financial resources in the accomplishment of DoD operations to include specific programs such as depot maintenance and Field Logistics Support.

Components develop proposed budgets and submit them to the Department of the Navy for review. Navy challenges the Marine Corps submission through a series of NavCompt marks. Then the budgets are submitted to the Office of the Under Secretary of Defense (Comptroller) (OUSD(C)) for review. The budget estimate submits are reviewed jointly by the OUSD(C) and the OMB to ensure the Department's programs and dollars are correctly matched. After the series of budget reviews, OSD may challenge Service submits through a series of Program Budget Decisions (PBDs). Both Navy marks and OSD PBDs go through the reclama process. Reclama procedures are designed to guard against arbitrary or incorrect adjustments made during budget review. Then Congress reviews the budget request through a series of hearings, and produces an Authorization Bill and an Appropriation Bill. During the congressional budget hearings, each DoD component presents and defends its program before Congressional authorization and appropriations committees. Budget formulation ends when Congress passes the Appropriations Act and the President signs the Authorization and Appropriation Bills for the coming fiscal year.

The Deputy Commandant, Programs and Resources (DC, P&R) is the O&MMC/O&MMCR Appropriation Sponsor. MATCOM is responsible for Materiel Life Cycle Management (MLCM) requirements and resources. DC, P&R provides O&MMC/O&MMCR funding to Commander, MARCORMATCOM via an operating budget. The Commander, MATCOM then allocates the resources between MARCORSYSCOM and MARCORLOGBASES via sub-operating budgets.

Because of the continuous and overlapping nature of the PPBS process, at any one time Components will be engaged in reporting budget execution for the current fiscal year and formulating budget requirements for the following year as well as performing programming actions for the next Program Review (PR) or POM. While some of the actions are distinct to either the budget formulation or execution process, in reality each one informs and affects the other.

## **5.1 Guidelines for the Transition to Budgets, Budget Cycles, and Budget Preparation of the DLMP**

The following information provides general guidelines for the preparation, submission, and revision of the DLMP Program budgets throughout the POM/budget cycle. The intent is to provide sufficient information and clarification to increase communication between functional and financial managers within the Depot Maintenance Program. In order to provide the necessary consistency as the Program evolves from the POM process through the budget cycle, the following guidelines are established:

a. Number of units for total requirements (funded plus unfunded) will remain the same from the time the POM is submitted through the first year of the budget. Normally we do expect the number of units for total requirements (funded plus unfunded) to remain the same from POM to budget; however, if changes do occur then the changes need to be identified and explained. The costing of those units (dollars) will fluctuate according to budget guidance (i.e., inflation, surcharges, etc.). Total funding (dollars) will be adjusted/recosted for each budget submission based on budget guidance. Actual execution numbers will be reflected in the President's budget submission following the year of execution (e.g., FY 00 actuals will be reflected in the President's Budget which is submitted in January of FY 01). It is important to note that once actuals are laid in and the outyear dollar requirements are recosted based on actuals and budget guidance, this may cause an adjustment to the split of funded units and unfunded units, leaving the total unit requirement the same. Funded controls must be met; therefore, this may result in an increase/decrease to unfunded dollar requirements.

b. Unit requirements will be updated in the second year of the budget cycle. For example, the NavCompt Budget (June 01) will be updated to reflect current unit requirements for FY 03. Total funding (dollars) for FY02/03 will be adjusted/recosted to reflect FY 00 actuals plus FY 01, FY 02, and FY 03 inflation. At this time, costing changes for adjustments in repair (e.g., rebuild vs. I ROAN) will also be reflected.

c. The dollar values of the total unit requirement (funded plus unfunded) will be adjusted from the POM and from budget to budget, based on budget guidance. For example, these changes could be the result of inflation adjustments.

d. Source of repair actuals (direct labor hours/material) will be captured and reflected in the January President's Budget submission the year following execution. The O&MMC/O&MMCR OP-30 exhibits will reflect actuals (funded and unfunded) to include unit costs, total costs, man-hours, and quantities by TAMCN. Unfunded requirements are also referred to as deferred maintenance. Deferred maintenance is defined as maintenance that was not performed when it should have been or was scheduled to be and which, therefore, is put off or delayed for a future period. Deferred maintenance is broken down into two categories in the OP-30 exhibit:

(1) Unfunded executable deferred is deferred maintenance that could be accomplished should funding become available.

(2) Unfunded unexecutable deferred is deferred maintenance that cannot be accomplished due to operational/training schedules and/or industrial capacity regardless of the availability of funding (even if the initial reason the work was deferred may have been due to financial limitations).

e. Once actuals are reflected, this becomes the cost baseline for the next year plus inflation.

The intent of the above guidelines is to ensure program consistency from POM to budget and budget to budget to reflect proper costing of requirements at the right time in the budget cycle. These guidelines do not impact funding controls promulgated by CMC (DC P&R).

## **5.2 Responsibilities**

### **a. Commander, Marine Corps Materiel Command**

1. Receives budget guidance from DC, P&R and provides budget guidance to applicable subordinate commands.

2. Submits the O&MMC/O&MMCR (OP-30/OP-30R) budget exhibits to DC, P&R in support of the Navy, OSD/OMB, and Congressional Budget submissions.

3. Publishes a data call to the appropriate subordinate command(s) requesting the monthly phasing plan.

4. Receives all NAVCOMPT budget marks and OSD PBDs from DC, P&R and provide them to the appropriate subordinate command(s) for preparation of reclaims.

5. Consolidates input from subordinate commands and provides responses to reclaims, PBDs, and other budget justification data requests to DC, P&R as required.

6. Reviews, consolidates and prioritizes deficiencies/excesses for midyear review.

7. Submits the Distribution of Depot Maintenance Workload Report to DC, I&L by 7 December of each year.

8. Provides Overguidance and Unfunded Priority List information to DC, P&R as directed.

### **b. Commander, Marine Corps Logistics Bases**

1. Prepares the O&MMC/O&MMCR (OP-30/OP-30R) budget exhibits in support of the Navy, OSD/OMB, and Congressional Budgets.

2. Submits the O&MMC/O&MMCR (OP-30/OP-30R) budget exhibits to COMMARCORMATCOM.

3. Submits the monthly phasing plan to MARCORMATCOM.
4. Prepares and submits reklamas on all budget marks and/or PBDs to MARCORMATCOM as required.



## **VI. BUDGET - NAVY WORKING CAPITAL FUND (NWCF - DMAG)**

### **6.0 Introduction**

The NWCF activity groups are financed through customer reimbursement rather than direct appropriation of funds. In order for the NWCF financial structure to work as intended, customers (e.g., O&MMC/O&MMCR, etc.) must be provided financial resources which they can use to purchase goods and services from the NWCF business area providers. The providers must, in anticipation of or actual receipt of funded customer orders, have the authority to incur the costs required to produce or otherwise provide, goods and services to the customer. The means by which customers justify and obtain resources and business areas justify and obtain the authority to incur costs is through the PPBS. The PPBS is the vehicle through which customers obtain resources and business areas obtain cost authority. It is during budget formulation that Components are responsible for balancing NWCF business area budgets with the customers' appropriated budget requirements. One of the most critical links between the O&MMC/O&MMCR depot maintenance program and the Depot Maintenance Activity Group (DMAG) program under the NWCF in the budget process is workload. The DMAG budget is based on workload projections that are costed out in the budget. These workload projections must match customer workload projections shown in customer budgets. Supplier and customer workload must match in every phase of the budget. The workload in the customer account cannot be changed without considering the impact to the supplier account. This is a critical step. A few examples of customer accounts include:

- a. O&MMC (Direct Appropriation of Funds) - Finances active forces depot maintenance requirements.
- b. O&MMCR (Direct Appropriation of Funds) - Finances reserve forces depot maintenance requirements.
- c. PMC (Direct Appropriation of Funds) - Finances the Product Improvement Program (PIP) and Service Life Extension Program (SLEP) for all weapon systems.
- d. Supply Management Activity Group (SMAG) (Customer Reimbursement from Direct Appropriation) - Finances the repair of SDRs.
- e. Other DoD Organizations (Direct Appropriation of Funds) - Finances depot maintenance requirements.

### **6.1 The NWCF -DMAG Goals and Objectives**

The NWCF was created and designed to accomplish a number of goals and objectives.

The goals include:

- o Providing a more effective means for controlling the cost of goods and services required to be produced or furnished by NWCF activity groups, and a more effective and flexible means for financing, budgeting, and accounting for those

costs,

- Providing managers of NWCF activities the financial authority and flexibility required to procure and use manpower, materials and other resources effectively, and
- Facilitating budget for, and reports of, the costs of end products, underlining the cost consequences of choosing among alternatives.

Specific objectives include:

- Furnishing managers of NWCF activity groups with modern management tools comparable to those used by private enterprises engaged in similar types of activities.
- Improving cost estimates and cost control through comparison of estimates and actual costs.
- Encouraging providers of goods and services to coordinate labor forces and inventories with workload, budgeting, and cost control,
- Placing customers in the position to critically evaluate labor forces and inventories with workload, budgeting, and cost control,
- Placing customers in the position to critically evaluate purchase prices and the quality of goods and services ordered, and
- Establishing standard prices or stabilized rates, and unit prices for goods and services furnished by NWCF activities areas, thus enabling customers to plan and budget more confidently.

## **6.2 Planning**

Planning is the first phase of PPBS. Planning considers the threat to national security and develops a strategy to deal with the threat. This strategy forms the basis for the DPG. The DPG provides fiscally constrained guidance on policy, strategy, force planning, and resource planning for all DoD organizations. The DPG links the Planning and Programming phases and serves as the yardstick for making programming and budgeting decisions. Components develop their program proposals in accordance with the DPG while Office of the Secretary of Defense (OSD) and the Joint Staff use it as the baseline for program review. The issuance of the DPG marks the beginning of the second phase, Programming. As it pertains to the NWCF, the planning phase is concerned with determining the nature of the support infrastructure required by the Department's military forces in the execution of the approved strategy.

### **6.3 Programming**

During the programming phase, depot maintenance customer requirements and NWCF - DMAG capabilities are evaluated. The demand caused by anticipated customer orders is the basis for determining workforce, facilities, and equipment investment levels. Components are required to submit amounts programmed by NWCF customers. Requirements generated by NWCF customers with appropriated funds must be provided for the full POM period. The intent is to identify customer funded requirements to a specific business area by appropriation.

### **6.4 Budgeting**

The budget process remains the same for both appropriated funds and NWCFs; however the primary purpose of budget formulation process is customers obtain resources and business areas such as DMAG obtain unit cost authority.

Components develop proposed budgets and submit them to the Department of the Navy for review. Navy challenges the Marine Corps submission through a series of NavCompt marks. Then the budgets are submitted to the Office of the Under Secretary of Defense (Comptroller) (OUSD(C)) for review. OUSD(C) reviews and approves all rates and prices developed, approve the Capital Purchases Program, as well as ensure that the NWCF business area budgets are balanced with the customers' appropriated budget requirements. The entire budget is reviewed to ensure the requests are properly priced, program schedules are appropriate, and estimates are consistent with OSD objectives. After a series of budget reviews, OSD may challenge Service submits through a series of Program Budget Decisions (PBDs). Both Navy marks and OSD PBDs go through the reclama process. Reclama procedures are designed to guard against arbitrary or incorrect adjustments made during budget review. Final approved costs, program levels, and rate changes are established by PBD decision documents. Then Congress reviews the budget request through a series of hearings, and produces an Authorization Bill and an Appropriation Bill. During the congressional budget hearings, each DoD component presents and defends its program before Congressional authorization and appropriation committees. Budget formulation ends when Congress passes the Appropriations Act and the President signs the Authorization and Appropriation Bills for the coming fiscal year.

Once Congress appropriates resources to DoD, OSD and the Components establish unit cost goals to the individual business area, in this case DMAG, and issue these in individual Annual Operating Budgets (AOBs). The AOBs contain the approved unit cost goals and the projected workload for DMAG.

Customers determine and justify their anticipated requirements for goods and services and levels of performance they require from the NWCF activity groups to fulfill mission objectives. The financial resources required by customers to purchase business area products are subsequently identified in budget request documents. The budget documents are developed using projected rates and prices published by the NWCF business area. As shown below, customers determine the amounts of goods and services they expect to purchase and prepare budget documents based on the projected rates and prices for goods and services.

Customer Determined Quantity	X	Business Area Estimated Prices/Rates	=	Budget Request
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If customers inaccurately state their requirements for NWCF financed goods and services, they may receive insufficient appropriated resources to meet mission requirements. What's more, inaccurate customer requirements data could cause managers to inappropriately "size" the depot maintenance business area operations (e.g., personnel, overhead, materiel, operating and capital budgets).

The Marine Corps submits a depot maintenance budget in the following three parts:

- (a) Narrative Analysis – At a minimum addresses the following areas: a general description of the depot maintenance business area, its outputs and customers, significant changes in the nature of the business over the period encompassed by the President's Budget submission; an analysis of the budget statements covering revenue and expenses, cost of operation, and the statement of financial condition. The analysis should focus on the changes from year to year and how these changes are related to workload and productivity trends, workload and manpower trends, productivity initiatives/costs reductions, unit cost, and customer prices incorporated in business area budgets.
- (b) Electronic submission of automated Department of Navy Industrial Budget Information System (DONIBIS) – At a minimum, includes financial and operational data.
- (c) Manual Budget Exhibits

Budget exhibit requirements with corresponding timelines can be found in the DoD 7000.14-R Financial Management Regulation, Volume 2B, Chapter 9, website: [www.dtic.mil/comptroller/fmr](http://www.dtic.mil/comptroller/fmr).

## 6.5 Full Recovery of Costs and the Setting of Rates and Prices

NWCF rates/prices are established and approved through the budget process and normally remain fixed during the year of execution. These rates/prices charged to customers are developed and proposed in the budget submission. Rates/prices are required to be established at levels estimated to recover the cost of products or services provided. Final approved rate changes are established by Office of the Under Secretary of Defense (Comptroller) and recorded in Program Budget Decision documents.

The budget process is also the mechanism used to ensure that adequate resources are budgeted in the customer's appropriated fund accounts to pay the established rates. Once approved, rates are stabilized (held constant) for the applicable fiscal year. This "stabilized rate" policy serves to

protect appropriated fund customers from unforeseen cost changes and thereby enables customers to more accurately plan and budget for NWCF support requirements. In turn, this policy also reduces disruptive fluctuations in planned NWCF workload levels and thereby permits more effective utilization of NWCF resources.

The depot maintenance business area is required to set their rates and prices to recover all operating and capital costs associated with the products or services to be provided. Rates and prices for the budget year will be set to recover the cost of products or services to be provided. This means that rates/prices will be set to achieve an Accumulated Operating Result (AOR) of zero in the budget year.. During budget execution, the depot maintenance business area will record either a positive or negative Net Operating Result (NOR). Accordingly, rates/prices in the budget year will be set to either make up actual or projected losses or to return actual or projected gains in the budget year(s). Customer funds will be concurrently adjusted through the budget process.

Gains or losses in operations may occur as a result of variations in program execution. Realized gains or losses are generally reflected in offsetting adjustments to stabilized rates established in subsequent fiscal years.

The depot maintenance business area uses unit cost rates established based on identified output measures. These output measures establish fully cost burdened rates per output such as cost per direct labor hour.

## **6.6 Unit Cost**

The DMAG is managed under a unit cost target that is expected to be achievable for production of an output. The unit cost goal is based on historical data (cost and output) adjusted for future known or expected changes. Unit cost focuses management attention on relating total cost with work accomplished (output produced). Outputs produced must be specifically identifiable and quantifiable. Costs are captured and categorized as: direct, indirect, and general and administrative costs. The unit cost (or average total cost) is the sum of these costs, divided by the number of units of outputs produced. The unit cost goal serves as a financial benchmark. The Under Secretary of Defense (Comptroller) develops and issues unit cost goals at the DoD component level for each support area.

## **6.7 Capital Purchases Program (CPP)**

The CPP represents the amount of financial resources that are required and authorized for use in acquiring and maintaining capital assets. It summarizes future plans for acquisition of plant facilities and equipment required for NWCF - DMAG. Capital expenditures are for new capital assets, to increase the utility of existing assets for more than one accounting period, or to substantially increase operating efficiency over more than one accounting period. Capital assets for the NWCF - DMAG business area are financed through depreciation or capital surcharge rates included in prices.

## 6.8 Responsibilities

### a. Commander, Marine Corps Materiel Command

1. Receives the monthly phasing plans request from DC, P&R and tasks the subordinate commands for development and submission.
2. Submit the Management of Depot Employees Report to DC, I&L by 15 December of each fiscal year.
3. Provides guidance on external reporting requirements.
4. Receives all NAVCOMPT budget marks and OSD PBDs from DC, P&R and provides them to the appropriate subordinate command(s) for preparation of reclamas.
5. Coordinates, consolidates and submits all depot maintenance reports required by higher headquarters.
6. Receives and reviews Annual Cost Authority requested changes from subordinate commands and submits them to DC, P&R who will eventually receive approval or disapproval from OSD.

### b. Commander, Marine Corps Logistics Bases

1. Receives budget call from COMMARCORMATCOM and submits any questions to MATCOM for clarification.
2. Prepares and submits budget (NavCompt, OSD/OMB, President) to MATCOM.
3. Prepares responses to budget questions, marks, reclamas and program budget decisions. Submit to MATCOM.
4. Develops and submits recommended/requested changes to Annual Cost Authority as necessary to COMMARCORMATCOM.
5. Prepares and submits annual phasing plan to COMMARCORMATCOM.

## **VII. BUDGET EXECUTION - APPROPRIATED FUNDS**

### **7.0 Introduction**

Budget formulation ends and execution begins when Congress passes the Appropriations Act and the President signs the Authorization and Appropriation Bills for the coming fiscal year. This legislation provides the funds to the Components. COMMARCORMATCOM receives the appropriated funds allocation from DC, P&R. COMMARCORMATCOM re-allocates and monitors the MATCOM Operating Budget. Reallocations are made via sub-OpBuds to COMMARCORLOGBASES and COMMARCORSYSCOM.

Quite frequently, the President of the United States will not sign the Defense Appropriation Bill by October 1st. Unless specifically informed otherwise through the chain of command, no layoffs or shutdowns will be initiated. Occasionally, the appropriation is approved but the authorization act is not. These situations do not normally stop government operations and rules for financing operations are published in the form of a Continuing Resolution Authority (CRA). In the event of a CRA, COMMARCORMATCOM will publish specific budget execution guidance to COMMARCORLOGBASES and COMMARCORSYSCOM. A CRA is a joint House-Senate resolution that provides budget authority for programs or agencies whose regular appropriation was not enacted by the start of the fiscal year. A continuing resolution is usually a temporary measure that expires on a specified date or is suspended by enactment of the regular appropriations act. Under CRA, commands are granted tentative authority to incur obligations for continuing operations usually up to the amount of recorded obligations for same period of prior year and will record only incurred obligations. New activities, new programs, new contracts, etc. are prohibited. It is incumbent on all not to exceed the tentative first quarter authority and/or any additional restrictions promulgated by higher headquarters.

Budget execution consists of three essential functions: monitoring execution, closing out records, and reporting execution. The next three sections in this Chapter will discuss in detail these three functions.

### **7.1 Monitor Execution**

As resources are being obligated and disbursed, execution is monitored in order to prevent exceeding the Total Obligational Authority (TOA). The tool utilized to monitor execution is the Standard Accounting, Budgeting and Reporting System (SABRS). SABRS provides full accounting support for all Marine Corps general funds at installation/intermediate command levels and support of departmental level accounting/reporting processes in compliance with Federal Financial Management Requirements (FFMRs). This system supports the Chief Financial Officer reporting requirements through provision of accurate/auditable data for financial statements. SABRS monitors authorizations, commitments, obligations, and disbursements for depot maintenance appropriated fund accounts.

The 1002 Report is prepared by the DFAS and provides monthly reports on budget execution. The report shows authority, obligation, liquidation, unpaid obligation, and available balance for obligation as well as abnormal accounts.

## 7.2 Closing out Records

Close out entails ensuring all transactions are reflected in the official accounting and reporting systems. If discrepancies exist, they must be resolved before the execution is deemed complete. This assures accuracy of information required to assess compliance with the statutory constraints of Title 10, Sections 2464 and 2466.

## 7.3 Reporting Execution

The logistics and acquisition communities are authorized to make depot maintenance workload decisions. The cumulative effect of these decisions must be assessed to determine if the Marine Corps is meeting congressional statutes, complying with Department of Defense reporting requirements, measuring productivity and efficiency, and meeting core capability requirements. As such, the Marine Corps is directed to submit the following reports:

a. **Distribution of Depot Maintenance Workload Report (50/50)**. Title 10 U.S.C. 2466 states that "no more than 50 percent of the funds made available in a fiscal year to a military department or a Defense Agency for depot-level maintenance and repair workload may be used to contract for the performance by non-Federal Government personnel of such workload for the military department or the Defense Agency. Any such funds that are not used for such a contract shall be used for the performance of depot-level maintenance and repair workload by employees of the Department of Defense."

To ensure compliance with this statute, the Secretary of Defense is required to submit to Congress a report identifying, for each of the armed forces (other than the Coast Guard) and each Defense Agency, the percentage of funds that were **obligated** during the preceding two fiscal years for performance of depot-level maintenance and repair workloads by the public and private sectors. Additionally, the Secretary of Defense is required to report the percentage of the funds that are projected to be **obligated** during each of the next five fiscal years for performance of depot level maintenance and repair workloads by the public and private sectors.

To meet the requirement of the Secretary of Defense, the Department of the Navy (DON) is required to consolidate Marine Corps data with the Navy's data in order to submit a DON report. To obtain this information from the Marine Corps, the DON requires that the Marine Corps provide a quarterly report in order to assess the percentage of depot maintenance workload being performed by the public and private sectors.

To fulfill the reporting requirements of the Secretary of Defense and DON, MARCORMATCOM is required to complete the Distribution of Depot Maintenance Workload Report (50/50) and submit the report to DC I&L by the 7th of December each year. Amplifying guidance from the DON includes the format for this report and is provided in Appendix C. Again, MARCORMATCOM submits this information to Headquarters; however, MARCORMATCOM obtains the information for this report from MARCORLOGBASES and MARCORSYSCOM's quarterly submissions of the Depot Sourcing and Expenditure Report (DSER). The DSER report is expounded upon below:



b. **Depot Sourcing and Expenditures Report (DSER).** In order to ensure depot level maintenance workload decisions made by the logistics and acquisition communities remain within the guidelines established in paragraphs 7.3.a. above, depot source of repair decisions must be tracked and reported as executed. DSER is defined as the assignment of workload to either contract or organic sources based on funds **obligated** to support depot maintenance workload. The Department of the Navy directs the Marine Corps to submit a quarterly report within one month after the end of each quarter. The DSER report should reflect the workload obligated for each quarter. The fourth quarter report should reflect SABRS obligations for the fiscal year. The formats for the DSER report are provided in Appendix D.

#### **7.4 Monthly Phasing Plan for O&MMC/O&MMCR**

The monthly phasing plan is a spreadsheet picture of 'when the authorized funds will be obligated.' Approximately four months prior to the beginning of the fiscal year executing, a request is made from HQMC, P&R for a monthly phasing plan of obligations. Obligations of authorized funds are monitored during the execution year per the monthly phasing plan and are expected to be at a minimum of 80% by July. For the remainder of the fiscal year, obligations are monitored as required.

#### **7.5 Responsibilities**

a. Commander, Marine Corps Materiel Command

1. Receives, re-allocates (sub-OpBuds), and monitors the COMMARCORMATCOM Operating Budget.
2. Submits the Distribution of Depot Maintenance Workload Report to DC, I & L by 7 December of each year.
3. Submits the Management of Depot Employees Report to DC, I & L by 15 December of each fiscal year.
4. Provides guidance on external reporting requirements.
5. Coordinates, consolidates and submits depot maintenance reports (e.g., phasing plans, quarterly reports, midyear review, DSER, etc.) required by higher headquarters.
6. Reviews, consolidates, and prioritizes deficiencies/excesses for midyear review.

b. COMMARCORSYSCOM

1. Responsible for monitoring the execution of their PMC allotment allocated to maintenance.
2. Delegated 1517 responsibility for the funds authorized on their allotment.

3. Provide phasing plans and status of execution reports to MATCOM as required.
4. Responsible for providing Midyear Review input to MARCORMATCOM when requested.

c. COMMARCORLOGBASES

1. Responsible for monitoring the execution of their Sub-OpBuds.
2. Delegated 1517 responsibility for the funds authorized on their Sub-OpBud.
3. Responsible for providing quarterly reports and Midyear Review input to MARCORMATCOM when requested.
4. Provide phasing plans and status of execution reports to MATCOM as required.
5. Prepare and submit quarterly DSER Report to MARCORMATCOM by the 7th of the month following the end of each quarters.

## **VIII - BUDGET EXECUTION - DMAG**

### **8.0 Introduction**

As discussed in Chapter VII, budget formulation ends and execution begins when Congress passes the Appropriation Act and the President signs the Authorization Bills for the coming fiscal year or operating under a CRA as a temporary measure.

Executing the DMAG budget consists of organic workload for ground weapon systems that is accomplished at the two Depot Maintenance Activities under the Commander, Marine Corps Materiel Command, Albany GA. This workload is financed through customer reimbursement from a direct appropriation.

Budget execution consists of four essential functions: scheduling requirements for production, monitoring execution, closing out records, and reporting execution. The next four sections in this Chapter will discuss in detail these three functions.

### **8.1 Schedule Requirements for Production**

Negotiated induction and production schedules must include administrative lead-time. Considering the input schedule, output schedules require the repair source to identify, based upon repair cycle and production lead-times, when an asset can be reasonably produced at the cost provided. For requirements that are not constrained by the customer, input schedules are based upon the quarter the requirement is to materialize. However, output schedules are based upon the repair source's repair cycle and production lead-times when the funds and assets are received. Once the input-output schedules are negotiated, they become the baseline for the Master Work Schedule (MWS).

Any subsequent changes to the baseline such as increases, decreases, or changes in work scope are analyzed for potential impact to the cost, schedule, and performance of the negotiated schedule. If the changes are determined to not have adverse impact on the negotiated schedule and the repair source agrees to accept the changes in workload, the MWS is adjusted accordingly, establishing a new baseline. However, if the changes are determined to have adverse impact on the negotiated MWS, the customer is given the option of assuming the adverse impact to the cost and/or schedule or of utilizing an alternative repair source. If the customer desires an alternative repair source, COMMARCORLOGBASES will have to seek an alternative repair source when they are not willing to assume the adverse impact or when the repair source does not have the ability to accept the changes.

## 8.2 Monitor Execution

As the DMAG provides goods and services, it receives revenue from services and actual cost incurred is the Net Operating Result (NOR). Operating to break even, the goal for DMAG is to achieve an annual NOR equal to zero. The goal for all years and for all divisions of the fund is an accumulated operating result (AOR) equal to zero.

A Component may reprogram its operating budget within business areas as long as it does not exceed its overall unit cost goal. Components may exceed their total annual capital budgets approved, implicitly or explicitly, by the Congress during review of the NWCF, only to carry out projects included in the operating budget as capital budget items because of revised cost estimates.

As workload begins materializing in accordance with the negotiated input-output Schedule, execution is monitored to prevent and resolve problems with cost, schedule, and performance. Tools utilized to monitor execution include the Defense Industrial Financial Management System (DI FMS), Production Progress Reports (PPR), Earned Value Management System (EVMS), and the Manufacturing Resource Planning II System (MRPII). The following is an overview of how each tool is utilized:

a. DI FMS is MARCORLOGBASES official financial accounting system for production operations. It contains information such as the production line numbers, funds and direct labor hours available, funds and direct labor hours executed, and work-in-process. It is used to track the performance of production lines through the utilization of comparative analysis such as the comparison between the rate at which direct labor hours are executed and the rate at which funds are expended. Any substantial variances between the two are further analyzed to prevent or resolve any cost, schedule, or performance problems.

b. The PPR is a status report provided to the customer and is used to gain detailed information about production lines not available through the financial accounting systems, e.g. parts problems. The additional information is used to reconcile discrepancies between the PPR and the official accounting system and to prevent or resolve problems.

c. EVMS is a management concept used to measure performance by comparing planned cost and schedule information to actual cost and schedule information. EVMS monitors production according to the resources and timelines associated with each element of the asset's work-break-down structure. This tool is used primarily for programs with a dollar value of at least 6 million dollars.

d. Compass CONTRACT software utilized to implement MRPII management philosophy is a shop floor control tool with the ability to schedule workload, plan material requirements for production lines, and monitor time spent on each production line. Compass CONTRACT has the capability to provide production data output that enables the tracking of jobs in both detail and summarized formats. MRPII is the source of information for EVMS.

Utilizing the above tools help prevent and resolve problems with budget execution of workload by providing valuable information required to measure performance, thus, ensuring output in accordance with the agreement between the customer and the DSOR.

Monthly Accounting Report of Operations (AR 1307) is the Marine Corps' official financial accounting report to track performance. The AR 1307 enables managers to track revenue, ensure all costs are being recorded, and to check for consistencies between the accounting and unit cost reports. The AR 1307 consists of two principal statements:

- A Statement of Financial Position which discloses the reporting entity's assets, liabilities, and net position; and
- A Statement of Operations (and Changes in Net Position) that discloses the results of the operations for the reporting period, including the changes in the entity's net position from the end of the prior reporting period.

The Report on Budget Execution, SF 133, is prepared by the DFAS and provides monthly reports on budget execution. The report shows the status of budgetary resources and financial data related to these budgetary resources. The report is intended to be used to review apportionments and appropriations.

The SF 133 is an obligation report that focuses on tracking execution against an appropriation. The first section shows budgetary authority. For DMAG, it shows customer orders and reimbursements earned. The second section shows obligations incurred. The third section reports on cash - disbursements, collections, and their relationship.

In addition to monthly review by function managers, quarterly execution reviews are performed by OUSD(C) and the Components. This review is carried out by designated senior managers in the logistics and/or financial areas to track performance against programmed goals and to identify problems and recommend solutions.

### **8.3 Close out Records**

After workload execution is completed in accordance with the negotiated input-output schedule, records must be reconciled to ensure proper close out. This entails ensuring all changes to cost and schedule are reflected in the official accounting and production systems. If discrepancies exist, they must be resolved before the execution is deemed complete. This assures accuracy of information required to assess compliance with the statutory constraints of Title 10, Sections 2464 and 2466.

Even as the current fiscal year's budget is being executed, the depot maintenance operations provide needed input into the preparation of the President's Budget. The Secretary of Defense sends both a quarterly and an annual report to congressional oversight committees. The quarterly report details the financial status and operations of the business area to date. This report gives the current cash balance and describes capital purchases. The annual summary details operations of the fund throughout the year. Submitted within 60 days after the year-end, the

annual report tells Congress not only how much support organizations spend to perform their mission but also how effectively they perform them.

#### 8.4 Reporting Execution

The logistics and acquisition communities are authorized to make depot maintenance workload decisions. The cumulative effect of these decisions must be assessed to determine if the Marine Corps is meeting congressional statutes, complying with Department of Defense reporting requirements, measuring productivity and efficiency, and meeting core capability requirements. As such, the Marine Corps is directed to submit the following reports:

a. **Cost Accounting and Production Report (1397)**. DoD 7000.14-R, DoD Financial Management Regulation, Volume 6, Chapter 14 outlines cost accounting procedures, reporting requirements, and format for DoD depot maintenance activities. This is an annual requirement with regard to reporting the accomplishment and status of depot maintenance workloads in DoD depot maintenance activities, other DoD activities, and private sector activities, whether accomplished by DoD military or civilian employees, or by non-Federal government employees. Further, these requirements apply to all depot maintenance workload regardless of DoD funding sources (e.g., Navy Working Capital Fund, Research and Development, Procurement, Operations and Maintenance). As a result, the MARCORMATCOM is required to submit this report to DC, I&L on cost accounting and production. The report contains an automated submission as well as a manual submission and is due to DC, I&L by 7 December annually. See Appendix E for report format.

b. **Management of Depot Employee Report**. Title 10 U.S.C. 2472 directs that no later than 1 December of each fiscal year, the Secretary of Defense shall submit to Congress a report identifying the number of employees employed and expected to be employed by the DoD during that fiscal year to perform depot level maintenance and repair of materiel. The report shall indicate whether that number is sufficient to perform the depot-level maintenance and repair functions for which funds expect to be provided for that fiscal year for performance by DoD employees. Figure 7-1 provides the format to be used in reporting this data.

	Depot/Activity	Employment Level (As of October 1)	Employment Level* (As of Sept 30)
<b><u>FY _____</u></b>	Marine Corps Depot Maintenance		
Civilian			
Direct			
Indirect			
Total			
* Anticipated employee level			

Figure 7-1

### **c. Accounting Report (1307)**

The accounting report consists of three principal statements: Statement of Financial Position, Statement of Cash Flow, and Statement of Operations (changes in net position).

(1). Statement of Financial Position discloses the reporting entity's assets, liabilities, and net position.

(2). Statement of Cash Flow discloses the reporting entity's gross cash receipts and disbursements with an explanation of the changes in cash for the reporting period.

(3). Statement of Operations (and Change in Net Position) discloses the results of the reporting entity's operations for the reporting period, including the changes in the entity's net position from the end of the prior reporting period.

d. The Financial Management Regulation, Volume 11b, Chapter 70 contains detailed information regarding preparing, reporting, and formatting requirements.

### **f. Chief Financial Officer Report**

Since the Chief Financial Officer's Act of 1990 followed by the Government Management Reform Act of 1994, Congress has called for an annual report of financial statements. The financial statements are referred to as 'Principal Statements' and are required to disclose an entity's financial position. The CFO report provides information that allows assessment of management performance and stewardship. At the end of each fiscal year, a cover letter, an overview and the Principal Statements are submitted to the Assistant Secretary of the Navy (Financial Management and Comptroller) via Headquarters Marine Corps (Code RFL). Federal Management Regulations, Vol. 6B provides information and instructions for the preparation and submission of the Financial Audited Statements and the accompanying notes also referred to as the CFO report.

## **8.5 Monthly Phasing**

The budget formulation exhibits for the NWCF will include a monthly phasing plan for revenue, direct costs, indirect costs, total costs, WIP change, net revenue, direct labor hours, new orders, disbursements, collections, net outlays, accounts receivable, and accounts payable. The execution of the budget is tracked against the budget exhibits that were last submitted. (i.e., Execution beginning in October of the new fiscal year will be compared to the phasing plan submitted in the OSD budget submission the previous September and when the President's budget is submitted the following January). The execution plan will be compared to the PresBud figures.)

## **8.6 Midyear Review**

MARCORMATCOM provides guidance and format for midyear review submission of excesses/deficiencies. Deficiencies/excesses will be reviewed, consolidated, and prioritized by MARCORMATCOM. MARCORLOGBASES and MARCORSYSCOM are responsible for providing their respective Midyear Review input to MATCOM when requested. If possible, internal realignments

will be made to cover deficiencies. If not, a consolidated midyear request may be submitted to higher headquarters by MARCORMATCOM.

## **8.7 Responsibilities**

### **a. Commander, Marine Corps Materiel Command**

1. Submits the Management of Depot Employees Report to DC, I & L by 15 December of each fiscal year.

2. Provides guidance on external reporting requirements.

3. Coordinates, consolidates and submits depot maintenance reports (e.g., 1397, Management of Depot Employee Report, midyear review, etc.) required by higher headquarters.

4. Certifies the Chief Financial Officer Statement.

### **b. COMMARCORSYSCOM**

1. Provides phasing plans and status of execution reports to MATCOM as required.

2. Responsible for providing Midyear Review input to MARCORMATCOM when requested.

### **c. COMMARCORLOGBASES**

5. Prepares and participates in the Chief Financial Officer Statement certification.

6. Identifies and submits letter of intent to exceed 3 month carryover to MATCOM as necessary.

7. Prepares and submits monthly CPP report to DFAS – Kansas City by 10<sup>th</sup> of each month and submit to MATCOM by 15<sup>th</sup> of each month.

8. Negotiates, schedules, and monitors production for workload identified through the Depot Maintenance Interservice (DMI) Study, Master Work Schedule (MWS), and Master Work Plan (MWP).

9. Seeks and determines alternate repair sources when changes in workload have adverse impacts on the designated source of repair.

10. Reviews and validates the Accounting Report (1307) and reconciles discrepancies with Defense Finance and Accounting Services (DFAS).

11. Prepares and submits Cost Accounting and Production Report (1397) to MARCORMATCOM by 15 November annually.



12. Reconciles financial records to ensure proper closeout of completed and carry-over workload.

## **IX. POLICY**

### **9.0 Introduction**

The following congressional language and published policies have both direct and indirect impacts to various logistics communities and to the DLMP:

### **9.1 Title 10 U.S.C.**

**9.1.1.** Section 2208(j) authorizes a working capital funded industrial facility of that department to manufacture or remanufacture articles and sell these articles, as well as manufacturing or remanufacturing services provided by such facilities, to persons outside the Department of Defense.

**9.1.2** Section 2460 defines Depot Level Maintenance.

**9.1.3.** Section 2464 outlines the Marine Corps requirement to establish and report the minimum CORE logistics capabilities required to ensure that contingency operations are not compromised due to a lack of essential depot maintenance support.

**9.1.4.** Section 2466 limits the depot level maintenance and repair workload performed by a contractor to no more than 50 percent of the funds made available in a fiscal year to a military department or a Defense Agency. As such, the Marine Corps is directed to submit to Congress a report identifying the percentage of depot maintenance workload performed by a contractor and by organic depots.

**9.1.5.** Section 2469 provides guidance on the requirement to compete contracts on workload previously performed by depot level activities of the Department of Defense (DoD).

**9.1.6.** Section 2470 addresses the authority for DoD depot level activities to compete for maintenance and repair workloads of other federal agencies.

**9.1.7.** Section 2472 prohibits employees performing or being involved in the performance of depot level maintenance repair workloads from being managed on the basis of a constraint or limitation in terms of man years, end strength, full time equivalent positions or maximum number of employees. Such employees shall be managed solely on the basis of available workload and the funds made available for such depot level maintenance and repair.

**9.1.8.** Section 2474 requires the Military Services to designate depot maintenance capabilities as Centers of Industrial Technical Excellence (CITEs), authorizes and encourages public-private partnerships, permits performance of work related to core competencies, permits use of facilities and equipment, and permits sales proceeds from public-private partnerships to be credited to depot accounts. Refer to chapter 3 of this handbook for policy on public-private partnerships.

## **9.2 MCO 4400.193 - PEI Stratification**

The PEI Stratification is a modeling tool that allows for the comparison of assets (PEIs) against requirements. It assists in the determination and rapid identification of deficiencies and excesses. The objective of PEI Stratification includes determining quantity deficiencies/excesses, determining budget deficiencies in the Procurement Marine Corps (PMC) and the O&MMC/O&MMCR appropriation for maintenance of equipment and supply support programs, and finally to link funding deficiencies with priorities.

## **9.3 Priority for Distribution of Principal End Items (PEIs)**

The prioritization of 11 specific areas from MPS through the Mobilization Allowance give valuable insight into how HQMC views readiness in terms of priorities to meet operational and training needs/requirements. In 1996 HQMC released a message (CMC Message R100104Z Sep 96) to promulgate information and guidance regarding the distribution of PEIs as it relates to and in conjunction with the PEI Stratification process.

## **9.4 MCO 4400.194 - Marine Corps Class VII Stock Rotation Program**

The Marine Corps Class VII Stock Rotation Programs are used in order to enhance readiness, prolong service life, and to achieve full and uniform use of the Marine Corps Class VII assets prior to disposal. It is to help the Commanders facilitate the rotation and preserve the Marine Corps strategic capability. There are five different types of rotation programs: Repair and Evacuation; midlife rebuild; service life extension program; product improvement program; and weapon's exchange program.

## **9.5 Cost Comparability Handbook**

Establishes policy and procedures for consistency in applying evaluation factors to a solicitation for public-public and public-private competitions. [www.jdmag.wpafb.af.mil](http://www.jdmag.wpafb.af.mil).

## **9.6 MCO P4790.10B - Joint Depot Maintenance Program**

Establishes policy and provides procedures for determining the source of repair and implementing the Joint Depot Maintenance Program uniformly in the Department of Defense.

## **9.7 DoD 7000.14-R, DoD Financial Management Regulation, Volume 6, Chapter 14.**

Outlines cost accounting procedures, reporting requirements, and format for DoD depot maintenance activities.

## **9.8 DoD 4151.18H - Maintenance of Military Materiel, 12 Aug 92**

Provides guidance for a common methodology to measure and provide visibility of the capacity and utilization of DoD organic depot maintenance activities that perform depot level maintenance of military materiel.

#### **9.9 Title 41, Section 423, USC Federal Acquisition Regulation**

Provides policy and procedures to ensure that workload competitions are conducted under consistent processes with assurance that bidders will be treated fairly and equitably to the maximum extent possible.

#### **9.10 Defense Federal Acquisition Regulations Supplement (DFARS)**

Provides policy and procedures to ensure that workload competitions are conducted under consistent processes with assurance that bidders will be treated fairly and equitably to the maximum extent possible. ([www.acq.osd.mil](http://www.acq.osd.mil))

#### **9.11 Navy Acquisition Procurement Supplement (NAPS)**

Provides policy and procedures to ensure that workload competitions are conducted under consistent processes with assurance that bidders will be treated fairly and equitably to the maximum extent possible.

#### **9.12 MCO - 4000.56 - Marine Corps Policy on Depot Maintenance CORE Capability**

Provides policy on establishing the minimum depot maintenance CORE capabilities required to ensure that contingency operations are not compromised due to a lack of essential depot maintenance support.

#### **9.13 MCO 4200.33 - Contractor Logistics Support for Ground Equipment, Ground Weapon Systems, Munitions, and Information Systems**

Provides policy for the consideration, selection and use of Contractor Logistics Support for Marine Corps ground equipment, ground weapon systems, munitions, and information systems.

## **X. SUMMARY AND CONCLUSION**

The Marine Corps DLMP requirements determination process is an iterative and continuous process. This process will likely evolve for the foreseeable future as it continues to address the needs of the Marine Corps while incorporating better business practices and management decisions into the process.

The conclusion to be drawn is the DLMP requirements determination process accurately and more fully justifies the depot maintenance requirement. It aligns equipment to a warfighting need and allows for decisions makers to determine repair versus buy decisions based on a corporate and long-term review of Marine Corps resources. The process integrates the logistics community and places life cycle management of the weapon system as the critical element for the allocation of scarce resources. It is incumbent upon all participants to continue improving the DLMP requirements determination process.

## **APPENDIX A:**

### **ACRONYMS**

AAAV	Advanced Amphibious Assault Vehicle
AAO	Approved Acquisition Objective
ACAT	Acquisition Category
AG/SAG	Activity Group/Sub-Activity Group
AOR	Accumulated Operating Result
ASEC	Analytical Systems Engineering Corporation
ATE	Automatic Test Equipment
BES	Budget Estimate Submission
CBD	Commerce Business Daily
CFO	Chief Financial Officer
CLS	Contractor Logistics Support
CMC	Commandant of the Marine Corps
COMMARCORLOGBASES	Commander, Marine Corps Logistics Bases
COMMARCOMATCOM	Commander, Marine Corps Materiel Command
COMMARCOMSYSCOM	Commander, Marine Corps Systems Command
COTS	Commercial-off-the-shelf
CG	Commanding General
CRA	Continuing Resolution Authority
DC, I & L	Deputy Commandant, Installations and Logistics
DC, P&R	Deputy Commandant, Programs and Resources
DC, PP&O	Deputy Commandant, Plans, Policies and Operations
DERO	Dynamic Equipment Repair Optimization
DDMC	Defense Depot Maintenance Council
DFARS	Defense Federal Acquisition Regulations Supplement
DFAS	Defense Finance & Accounting Services
DI FMS	Defense Industrial Financial Management System
DLH	Direct Labor Hours
DLMP	Depot Level Maintenance Program
DLSOR	Depot Level Source of Repair
DMAG	Depot Maintenance Activity Group
DMFA	Depot Maintenance Float Allowance
DMI	Depot Maintenance Interservice
DMI SA	Depot Maintenance Interservice Support Agreement
DoD	Department of Defense
DODD	Department of Defense Directive
DON	Department of the Navy
DONIBIS	Department of the Navy Industrial Budget Information System
DPG	Defense Planning Guidance
DSER	Depot Sourcing & Expenditure Report
DSOR	Depot Source of Repair
DSP	Depot Support Proposal
DTA	Decision Tree Analysis
EAF	Equipment Allowance File
EEAP	Enhanced Equipment Allowance Pool
EMD	Engineering & Manufacturing Development
EVMS	Earned Value Management System

FAR	Federal Acquisition Regulation
FY	Fiscal Year
FYDP	Future Years Defense Plan
G&A	General & Administrative
HQMC	Headquarters Marine Corps
ICS	Interim Contractor Support
IPT	Integrated Product Team
I ROAN	Inspect and Repair Only as Necessary
JCS	Joint Chiefs of Staff
JDM	Joint Depot Maintenance
JDMAG	Joint Depot Maintenance Activities Group
JGDM	Joint Group Depot Maintenance
JLC	Joint Logistics Commander
JPCG-DM	Joint Policy Coordinating Group - Depot Maintenance
LAP	Letter of Adoption and Procurement
LMI S	Logistics Management Information System
LMS	Logistics Management Specialist
MA	Mission Area
MAFE	Marine Air Ground Task Force (MAGTF) Assessment for Equipment
MAGTF	Marine Air Ground Task Force
MARCORLOGBASES	Marine Corps Logistics Bases
MARCORMATCOM	Marine Corps Materiel Command
MARCORSYSCOM	Marine Corps Systems Command
MARFORS	Marine Forces
MATCOM	Materiel Command
MCBUL	Marine Corps Bulletin
MCCDC	Marine Corps Combat Development Command
MCDSS	Materiel Capabilities Decision Support System
MCGERR	Marine Corps Ground Equipment Resource Reporting
MCLB	Marine Corps Logistics Base
MCLBA	Marine Corps Logistics Base Albany
MCMP	Marine Corps Master Plan
MCO	Marine Corps Order
MEF	Marine Expeditionary Force
MEQPT	Major Equipment
MI PR	Military Interdepartmental Purchase Request
MI SO	Maintenance Interservice Support Officer
MI SMO	Maintenance Interservice Support Management Office
MLCM	Materiel Life Cycle Management
MOA	Memorandum of Agreement
MOS	Military Occupational Skill
MOU	Memorandum of Understanding
MNS	Mission Needs Statement
MPF	Maritime Prepositioning Forces
MPS	Maritime Prepositioning Ships
MROC	Marine Requirements Oversight Council



MRP II	Manufacturing Resource Planning II System
MSC	Military Sealift Command
MWP	Master Work Plan
MWS	Master Work Schedule
NAPS	Navy Acquisition Procurement Supplement
NDI	Non-developmental Item
NOR	Net Operating Result
NWCF	Navy Working Capital Fund
O&M	Operation & Maintenance
OMB	Office of Management and Budget
O/H	On Hand
O&MMC	Operation and Maintenance Marine Corps
O&MMCR	Operation and Maintenance Marine Corps Reserve
OPBUD	Operating Budget
ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense
OSD/OMB	Office of the Secretary of Defense/Office of Management and Budget
OUSD(C)	Office of the Under Secretary of Defense (Comptroller)
PBD	Program Budget Decision
PDM	Program Decision Memorandum
PEG	Program Evaluation Group
PEI	Principal End Item
PI CA	Primary Inventory Control Activity
PIP	Product Improvement Program
PMC	Procurement Marine Corps
POM	Program Objective Memorandum
PPBS	Planning, Programming, and Budgeting System
PPL	Program Priority List
PP&O	Plans, Policies and Operations
PPR	Production Progress Reports
PR	Program Review
PRESBUD	Presidents Budget
P&R	Programs and Resources
PRL	Prioritization Requirements List
PWG	Program Working Group
RA	Requisition Authority
RFI	Ready for Issue
SCS	Stock Control System
SDR	Secondary Depot Level Repairable
SLEP	Service Life Extension Program
SMAG	Supply Management Activity Group
SOW	Statement of Work
SSA	Source Selection Authority
SYSCOM	Systems Command
TAMCN	Table of Authorized Materiel Control Number

T/E	Table of Equipment
TMDE	Test Measurement and Diagnostic Equipment
USC	United States Code
ULSS	User's Logistics Support Summary
WBS	Work Breakdown Structure
WMR	War Materiel Requirement
WRMR	War Reserve Materiel Requirement

## **APPENDIX B:**

### **SOURCES**

## **LIST OF SOURCES**

1. Analytical Systems Engineering Corporation (ASEC) Study, Depot Level Maintenance Program: Processes and Methodologies for the Development, Alignment, Prioritization, and Review of Depot Maintenance Requirements Study. 3920 Lansing Court Dumfries, Virginia 22026. January 9, 1998. UNCLASSIFIED.
2. Defense Business Operations Fund Handbook, July 1995, CALIBRE Systems, Inc., Falls Church, Virginia, and the Office of the Under Secretary of Defense (Comptroller), Washington, D.C.
3. Draft Naval Audit Service Report (99-0101), Department of the Navy, Principal Statements for Fiscal Year 1998: National Defense Property, Plant, and Equipment Deferred Maintenance, 19 April 1999.
4. Military Operations Research, Volume 4, Number 3 1999, A publication of the Military Operations Research Society
5. February 2000 Gazette article - Resource Allocation: A Practical Example
6. DoD 7000.14-R Financial Management Regulation, Volume 2B
7. Under Secretary of Defense (Comptroller) Unit Cost Handbook
8. MCO P4490.1 - Ground Class VI I Materiel Requirements Determination; Approved Acquisition Objective (AAO)
9. MCO 4790.10B - The Joint Depot Maintenance (JDM) Program
10. Title 10 United States Code
11. DODD 4151.18 - Maintenance of Military Materiel, 12 Aug 92
12. Title 41 United States Code
13. Federal Acquisition Regulations
14. Defense Federal Acquisition Regulations Supplement (DFARS)
15. Navy Acquisition Procurement Supplement (NAPS)
16. Cost Comparability Handbook (CCHB)
17. Defense Planning Guidance

Websites:

[www.dtic.mil/comptroller/fmr](http://www.dtic.mil/comptroller/fmr)

[www.acq.osd.mil](http://www.acq.osd.mil)

[www.usmc.mil/publications/Marine Corps Orders/Directives](http://www.usmc.mil/publications/Marine%20Corps%20Orders/Directives)

[www.jdmag.wpafb.af.mil](http://www.jdmag.wpafb.af.mil)

**APPENDIX C:**  
**NAVY DEPOT MAINTENANCE WORKLOAD DISTRIBUTION**  
**DATA CALL PROCEDURES**

# **NAVY DEPOT MAINTENANCE WORKLOAD DISTRIBUTION**

## **DATA CALL PROCEDURES**

### **FY 20XX -20XX**

#### ***1. BACKGROUND***

Title 10 United States Code 2466, as amended by the National Defense Authorization Act of FY98, requires the Navy to accomplish, as a minimum, 50 percent of the funds managed by the Navy for depot maintenance by employees in the Department of Defense (DoD). In addition, the law requires the depot maintenance organic/contract ratio be reported to Congress.

#### ***2. DEPOT MAINTENANCE WORKLOAD DEFINITION***

a. Based on Title 10 USC 2460, depot-level maintenance and repair means material maintenance or repair requiring the overhaul, upgrading or rebuilding of end items (including weapon systems), subsystems, parts, assemblies or subassemblies and the testing and reclamation of equipment as necessary regardless of the source of funds for or the location of the maintenance or repair. This term includes all aspects of software maintenance classified by the DoD as depot level maintenance and repair, and Interim Contractor Support (ICS) or Contractor Logistics Support (CLS) to the extent that such support is for the performance of services described above.

b. For added clarification, depot maintenance also includes depot field teams, maintenance engineering, technical support, manufacture of parts, certain modifications (or related actions), testing and reclamation as performed at an organic or contract depot or by depot or contract field teams. Depot maintenance serves to support lower levels of maintenance by providing technical assistance and maintenance capability beyond their responsibilities or capability. Depot maintenance provides end items and stocks of serviceable material and equipment by using more extensive facilities, equipment, technical data or expertise than is available in lower levels of maintenance activities. Finally, any additional warranty costs, over and above an available standard commercial warranty, is included. This also includes extended warranties or negotiated warranties where depot maintenance costs can be identified separately.

c. Depot-level software maintenance comprises software maintenance performed on military material (e.g., weapon system and their components, space control systems and their components, automated test equipment and test program, sets, and systems integration laboratories). Depot level software maintenance does not include maintenance of business data systems (Information Systems Activity Group) since that is already included in General and Administrative (G&A) costs. Software maintenance includes activities necessary to 1) correct errors in the software; 2) add incremental capability improvements (or delete unneeded features) through software changes; and 3) adapt software to retain compatibility with hardware or other systems with which the software interfaces. For purposes of this reporting requirement, only depot-level software maintenance will be reported. Depot-level software maintenance will be reported regardless of location or funding source.

#### ***3. WHAT IS INCLUDED***

a. The Department of the Navy's (DoN) depot maintenance includes all such workload funded by and performed for Navy, Naval Reserves, Marine Corps, and Military Sealift Command (MSC). For this data call, include all depot maintenance dollars funded from a principle perspective. Specifically, depot maintenance funding received from another service, agency, foreign military sales customer, or any non-Navy funding will not be reported. Report customer order dollars obligated (or expected to be obligated) regardless of the year appropriated. In other words, if a program involves three-year money, report all new customer order dollars for contracts awarded during the reportable year for all three years of appropriated dollars.

b. Included are all Navy-sourced orders placed with the Navy industrial activities, or used to contract for depot maintenance services. Finally, Navy depot maintenance workload includes procurement-funded orders for modification installations, Navy Inventory Control Point (ICP) orders for Depot Level Repairables (DLR), and the

depot maintenance component of Interim Contractor Support (ICS), Contract Logistics Support (CLS), and similar contracts. The types of depot activities to include as depot maintenance for this data call are:

### **INCLUDE**

- “Traditional” maintenance, repair, rebuilding, rework of parts, assemblies and subassemblies
- Overhaul and upgrade of ships and equipment
- Software maintenance
- Interim Contractor Support and Contractor Logistics Support
- Applies to all funding sources, sponsors, and customers: O&M,N; O&M,NR; OPN/WPN; RDT&E; DWCF
- Applies to all locations performing depot level maintenance and repair

### **EXCLUDE**

- Procurement of major modifications or upgrades of weapon systems that are designed to improve performance
- Nuclear refueling of Aircraft Carriers
- Procurement of safety modifications
- Software Development

#### **4. RESPONSIBILITIES**

Chief of Naval Operations (CNO N43) is the overall Navy focal point for reporting final Navy workload distribution figures to other DoD agencies. N43 responsibilities include:

- Providing guidance on DoD reporting requirements.
- Consolidating all depot workload distribution data in response to the annual 50/50 data call.
- Serving as the single Navy point of contact for 50/50 data call procedures, issues and reporting.

Attachment 1 lists the Navy’s reporting organizations and summarizes their various Sub-Activities and Program Offices, and identifies data systems and sources they use to obtain both actual and projected 50/50 data. Each reporting organization designates a single point of contact (POC) who is responsible for:

- Consolidating data call inputs for all actual and budgeted depot level workload at all locations and for appropriations using the reporting templates in attachment 2.
- Providing data call guidance to all Sub-Activities and Program Offices from which that person obtains inputs.
- Ensuring data reported for a program does not contain duplication. Care must be taken in reporting workload associated with depot level repairables (DLRs), government furnished material (GFM), warranty items, and public/private sector partnering arrangements, etc. The individual identified above needs to ensure there is only a single input for that program.
- Compiling and maintaining accurate source documentation to support their depot workload data call inputs. This source documentation is required as backup information to support GAO and Naval



Audit Service audits. Such material should include, but not be limited to, information related to funding sources, type appropriations, task descriptions, dates pulled, etc.

Reporting organizations should also establish internal control procedures to ensure that all Sub-Activities and Program Offices have received data call guidance.

Individual organic depot responsibilities may include:

- Compiling depot workload totals for certain programs and providing them upline to the reporting organization POCs as necessary. Examples include Farm-In/Farm-Out (FIFO) workload contracted directly by organic depots for performance by non-Federal personnel, and Contract-Out/Farm-In (COFI) workload contracted Directly to organic depots by non-DoD entities for performance by employees of DoD.

## **5. TYPES OF DEPOT MAINTENANCE WORKLOAD**

Depot workload performed at Navy sources of repair for other services will not be included in Navy workload totals. However, depot workload performed by other services for Navy programs will be included in the totals by the Navy program manager responsible for assigning and funding the interservice workload. The Navy program manager or production management specialist responsible for interservice workload will report whether the other services are repairing the Navy program assets organically or by contract.

## **6. ALGORITHMS**

To the extent that the detailed data is readily available, it is desirable that depot level maintenance and repair-related ICS and CLS funding be reported as called for specifically in existing/planned contracts. If it is not practical to determine the amount to be reported based on specific contract line items or other direct means, program managers may establish algorithms or estimation formulas for determining the portion of ICS, CLS, or any similar support contracts that is for the performance of depot maintenance and repair. In those cases where other than actual data is reported, the program managers will ensure there is documentation available to support the algorithms or ratios established for identifying the portion of the contract workload as being depot maintenance.

The consolidation of Depot and Intermediate maintenance activities require special attention. Until such time as automated accounting systems are fully integrated, it may be necessary to use algorithms to segregate intermediate from depot maintenance costs for purposes of 50/50 reporting.

## **7. GENERAL GUIDANCE**

Refer to Attachment 3 for additional DoD guidance.

## **8. MEMO ENTRIES**

Depot-level software maintenance comprises software maintenance performed on military material (e.g., weapon system and their components, space control systems and their components, automated test equipment and test program, sets, and systems integration laboratories). Depot level software maintenance does not include maintenance of business data systems, since that is already included in G&A. Software maintenance includes activities necessary to correct errors in the software, add incremental capability improvements (or delete unneeded features) through software changes, and adapt software to retain compatibility with hardware or other systems with which the software interfaces. For purposes of this report, only depot-level software maintenance will be reported. Depot-level software maintenance will be reported regardless of location or funding source.

Software maintenance workload is a subcomponent of other depot maintenance activities. Visibility of this workload is required to be identified separately as a non-additive memo entry. This separate accounting is necessary because this is a high interest category. For the prior fiscal year, report the actual dollars used for software maintenance. For the outyears, report the budgeted dollars, not requirements data).

## Attachment 1

### NAVY DEPOT MAINTENANCE WORKLOAD DISTRIBUTION DATA CALL PROCEDURES

#### RESPONSIBILITIES MATRIX

Reporting Organizations	Sub-Activities / Program Offices Providing Input	Systems/Sources used to obtain actual data	Systems/Sources used to obtain projected data	Appropriations
NAVSUP	NAVICP-Phil	Allotment Accrual Accounting System (PX02/PX04)	President's Budget Submission and Budget Estimates	NWCF, OMN
	NAVICP-Mech	Auto Carcass Movement (ACM) Supply Demand Review (SDR)	Organic Repair Obligation Plan	
NAVSEA	EXW	Standard Accounting and Reporting System (STARS) OP-30 PEO Financial Management Information Systems (FMIS) Management Information Systems (MIS) Fleet Modernization Program Management Information System (FMPMIS) Funding documents Budget Estimates Project Leads	Financial Management Information Systems (FMIS) Management Information Systems (MIS) Budget Estimates	OMN, OMN&R, WPN, RDT&E,N, OPN
	FMP			
	TSC			
	91FW			
	USW			
	Search Radar			
	MTS & MPTL			
	Nuclear Ship Inactivation			
	Ship Support			
	2F COG Electronics			
	MIW			
	AWS Range Support			
	ROV & UWSH			
	2S COG			
	Submarine Combat Systems			
	Naval Shipyards			
NAVAIR	EAF	OP-30 OP-32 Annual FY Financial Plan STARS Statement of Work Air Tasks Spend Plans Funding documents (NAVCOMPT Form 2276A) Management Information Systems (MIS)	Budget Exhibits for APN programs (P5, P3A, and P18) Program Level Funding Summary for OMN programs ( Presidents Budget Controls)	OMN, OMN,R, RDT&E, APN,
	MATCALs			
	Aircraft Rework			
	Target Maintenance			
	Aircraft Camera Repairs and Overhaul			
NAVAIR	Calibration	OP-30 OP-32 Annual FY Financial Plan STARS Statement of Work Air Tasks Spend Plans Funding documents (NAVCOMPT Form 2276A)	Budget Exhibits for APN programs (P5, P3A, and P18) Program Level Funding Summary for OMN programs ( Presidents Budget Controls)	OMN, OMN,R, RDT&E, APN,
	GSE Rework			
	E-6A ROR			
	Cruise Missile			
	Tactical Missile Maintenance			

Reporting Organizations	Sub-Activities / Program Offices Providing Input	Systems/Sources used to obtain actual data	Systems/Sources used to obtain projected data	Appropriations
	Ordinance Maintenance	(NAVCOMPT Form 2276A) Management Information Systems (MIS)		
	Special Weapons Maintenance			
	TAMPS			
	Tactical Systems Software			
	AV-8B Remanufacture			
	Power Plant Changes			
	F-14 MOD			
	T-45 MOD			
	H-46 MOD			
	SH-3 MOD			
	Cargo MOD			
	Trainer MOD			
	C/KC-130 MOD			
	P-3 MOD			
	S-3 MOD			
	ES-3 MOD			
	EP-3 MOD			
	Common Avionics			
	Spares			
	H-53 MOD			
	AH-1 MOD			
	UH-1 MOD			
NAVAIR	H-60 MOD	OP-30 OP-32 Annual FY Financial Plan STARS Statement of Work Air Tasks Spend Plans Funding documents (NAVCOMPT Form 2276A) Management Information Systems (MIS)	Budget Exhibits for APN programs (P5, P3A, and P18) Program Level Funding Summary for OMN programs ( Presidents Budget Controls)	OMN, OMN,R, RDT&E, APN
	EX HELO			
	F-18 MOD			
	F-18 C/D			
	E-2			
	E-2 MOD			
	EA-6 MOD			
	C-2 MOD			
	RDT&E A/C Support			
Military Sealift Command	PM1	Financial Management Information System (FMIS) COGNOS General Ledger Accounts (GLA)		WCF GLAs 6601, 6602, 6603, 6605, 6606, 6607, 6630, 6635
	PM2			

Reporting Organizations	Sub-Activities / Program Offices Providing Input	Systems/Sources used to obtain actual data	Systems/Sources used to obtain projected data	Appropriations
	PM3			
	PM5			
Marine Corps	Logistics Bases	Standard Accounting Budgeting Reporting System (SABRS) Format D-13 Source Rebuild Information Maintenance Budgets Repair Requirements Funding Documents WCF Execution Report OP-32	OP-32 Format D-13 Budget Estimates Master Work Schedule Marine Corps Decision Support System	OMMC, OMMCR, WCF
	Fleet Support			
	Stock Fund			
	Systems Command (specific program offices)			
	MarFors			
SPAWAR	Advance Concept and Technologies	Estimates Management Information Systems	Estimates Management Information Systems	OMN, RDT&E, WCF, MILCON
	Space Technologies Systems			
	Information Support Systems			
	Information Warfare Systems			
	Communications Systems			
	Intelligence, Surveillance and Recon Systems			
PACFLT	SUPSHIPS	Budget documents STARS-FL N43 Ship Maintenance Budget System Fleet Modernization Program Information		WCF
	NAVAL SHIPYARDS			
LANTFLT	Portsmouth Naval Shipyard	Management Information Systems Claimant Account Module System Work Request/Project Orders Request for Contractual Procurement (RCP) CINCLANT Budget Financial Management Information System (FMIS) Financial Management Execution (FME) Technical Operating Budget (TOB)	Baseline Assessment Memorandum Presidents Budget OP-30 Exhibit Estimates Prior year execution data from work requests, project orders, RCPs and TOBs	OMN, OMNR
	Newport News Naval Shipyard			
	Puget Sound Naval Shipyard			
	SUPSHIP			

Reporting Organizations	Sub-Activities / Program Offices Providing Input	Systems/Sources used to obtain actual data	Systems/Sources used to obtain projected data	Appropriations
	FTSCLANT	(TOB)		

## Attachment 2

### Distribution of Navy Depot Maintenance Workloads

Reporting

Organization: \_\_\_\_\_ <---Actual----> <-----Projection----->

Annual Workload Costs (\$M)	FY 20__	FY 20__	FY 20__	FY 20__	FY 20__	FY 20__	FY 20__
<b>Line 1:</b> Total Workload (Principal - Owner of Funds)							
<b>Line 2:</b> Total Workload Performed by Employees of DoD							
<b>Line 2a:</b> Depot-Level Software Workload by Employees of DoD							
<b>Line 2b:</b> Farm-In/Farm-Out (FIFO) Workload Contracted Directly by Organic Depot for Performance by Non-Federal Personnel							
<b>Line 2c:</b> Installation of Modifications by Employees of DoD							
<b>Line 3:</b> Total Workload Contracted for Performance by Non-Federal Personnel							
<b>Line 3a:</b> Depot-Level Software Contracted for Performance by Non-Federal Personnel							
<b>Line 3b:</b> ICS/CLS and Any Similar Contractor Support							
<b>Line 3c:</b> Workload Contracts Accomplished by Non-Federal Personnel at GOGOs							
<b>Line 3d:</b> Contract-Out/Farm-In (COFI) Workload Contracted Directly to Organic Depots by non-DoD entities for Performance by Employees of DoD							
<b>Line 3e:</b> Installation of Modifications Contracted for Performance by Non-Federal Personnel							
<b>Line 3f:</b> Warranty Workloads Contracted for Performance by Non-Federal Personnel							
<b>Line 3g:</b> Workload Contracted for Performance by Non- Federal Government Personnel other than CITE Partnering							
<b>Line 3h:</b> Workload Contracted for Performance by Non- Federal Government Personnel Exempt from 50% Limit as CITE Partnering							

Notes:

1. Line 2 plus Line 3 will equal Line 1
2. Line 2a is a memorandum entry to be included in Line 2.
3. Line 2b is a memorandum entry to be subtracted from Line 2 and included in Line 3.4. Lines 3a, 3b, 3c, 3e, and 3f are memorandum entries to be included in Line 3.
5. Line 3d is a memorandum entry to be subtracted from Line 3 and included in Line 2.
6. Contracted depot-level software support performed at a Government Owned Government-Operated installation is to be reflected on both lines 3a and 3c.
7. Report amounts in millions (\$M) rounding to the first decimal place (e.g., \$6,837.1).
8. Data source documentation should be noted and/or retained for all entries to facilitate follow-on reviews conducted by GAO, etc.
9. Line 3g plus 3h will equal Line 3.
10. Data source documentation should be noted and/or retained for all entries to facilitate follow-on reviews conducted by GAO, etc.
11. Line 3h:
  - o The depot maintenance activity on which the workload is performed must have been designated a Center of Industrial Technical Excellence (CITE) in accordance with 10 U.S.C. 2474(a)(1).
  - o The workload must be pursuant to a public-private partnership for depot maintenance. This includes partnerships under authority of 10 U.S.C. 2474 and other qualifying authorities (e.g., 10 U.S.C. 2208(j) and 10 U.S.C. 2563).
  - o The workload must be performed by private industry or other entities outside the DoD at a CITE.
    - o All contracts for depot maintenance accomplished by non-Federal Government personnel assigned to work on government owned and operated installations designated as CITEs do not automatically qualify as partnerships. For 10 U.S.C. 2466(e) reporting purposes, to qualify as partnering the contractor must be substantially responsible for the performance of the production deliverable, be it a weapon system, subsystem, item of equipment, or industrial process. Contractor direct labor augmentation is not a partnership. When a contractor substantially provides only a workforce and the Government provides facilities and controls the production process, that relationship does not qualify. In that case, the Government is contracting for a factor of production (labor) and is not engaging in a partnering arrangement.

## Attachment 3

### Distribution of DoD Depot Maintenance Workloads

#### **Requirements for Fiscal Year 20XX Data Call**

**Definition:** For purposes of this data call, depot maintenance workload refers to depot-level maintenance and repair of military materiel. “Depot-level maintenance and repair” means (except as provided below) materiel maintenance or repair requiring the overhaul, upgrading, or rebuilding of parts, assemblies, or subassemblies, and the testing and reclamation of equipment as necessary, regardless of the source of funds for the maintenance or repair or the location at which the maintenance or repair is performed. The term includes (1) all aspects of software maintenance as depot-level maintenance and repair, and (2) interim contractor support (ICS) or contractor logistics support (CLS) (or any similar contractor support), to the extent that such support is for performance of depot-level maintenance and repair. Depot-level maintenance and repair does not include (1) the procurement of major modifications or upgrades of weapon systems that are designed to improve program performance, (2) nuclear refueling of an aircraft carrier, and (3) procurement of parts for safety modifications (depot-level maintenance and repair does include the installation of parts for safety modifications).

- Applies only to military materiel, i.e., all items (including ships, tracked vehicles, wheeled vehicles, communications-electronics equipment, self-propelled weapons, aircraft, etc., and related spares, repair parts, and support equipment, but excluding real property, installations, and utilities) necessary to equip, operate, maintain, and support military activities.
- Applies to all depot maintenance support requirements, regardless of the source or sponsor of the program, e.g., headquarters/materiel/systems commands, inventory control points, and program managers.
- Applies to all funding sources and all customers budgeted or managed by the Military Department or Defense Agency, e.g., O&M, Procurement, RDT&E, and DoD Working Capital Fund (WCF) activities.
- Applies to all locations performing depot-level maintenance and repair. All maintenance and repair tasks designated or coded as depot-level that are performed in field or other non-depot locations are included.
- Includes all factors of production, e.g., labor, material, parts, indirect, and overhead. All factors of production associated with an order or contract will be aggregated with that order or contract and be characterized as “performance by employees of the Department of Defense” or as “contracted for performance by non-Federal personnel.” For example, purchased material supporting work performed by Department of Defense employees is counted as part of that order, while Government furnished material supporting work performed by contract employees is counted as part of the contract. Similarly, contract support for organic depot operations that does not directly result in organic depot maintenance production (e.g., contract maintenance of depot maintenance plant equipment) is defined as a factor of production and would be counted as part of the order “performed by employees of the Department of Defense.” In other words, the type of direct production personnel determines how all the factors of production will be classified. Specifically excluded are: (1) the procurement of modifications or upgrades that are designed to improve program performance, (2) the nuclear refueling of aircraft carriers, and (3) procurement of parts for safety modifications. Only the *installation* of performance and safety modifications and upgrades is to be included when the installation is considered a depot-level service (whether performed by Defense employees or by non-Federal personnel). Inclusion of the installation of both performance and safety modifications is a matter of DoD policy, since it is difficult to segregate installation costs for safety modifications from installation of other modifications.
- Does not include remanufacture wherein hulls, chassises, airframes and other major assemblies are utilized in new production. However, disassembly, reclamation, preparation, recovery, restoration and other depot maintenance actions accomplished prior to induction of the article into the remanufacturing process shall be accounted for as depot maintenance and repair.



*Percentage Limitation:* Effective with the enactment of the National Defense Authorization Act for Fiscal Year 1998, not more than 50 percent of the funds made available in a fiscal year to a Military Department or Defense Agency for depot-level maintenance and repair workload may be used to contract for the performance by non-Federal Government personnel of such workload for the Military Department or Defense Agency. Any such funds that are not used for such a contract shall be used for the performance of depot-level maintenance and repair workload by employees of the Department of Defense. The percentage limitation includes depot maintenance interim contractor support (ICS), contractor logistics support (CLS) and similar contracts as required by the National Defense Authorization Act for Fiscal Year 1998.

*Reporting conventions*

- Data will be collected by Armed Service (Army, Navy, Air Force and Marine Corps) and Defense Agency. For the report to Congress, the Navy and Marine Corps submissions will be both reported separately and combined, since the 50 percent limitation is by Military Department and Defense Agency.
- Some defense activities are neither a Military Department nor a 10 U.S.C. 101(a)(11) "Defense Agency" (e.g., US Special Operations Command (USSOCOM) and TRICARE Management Activity). These defense activities are required to complete the data call. They are not, however, subject to the 50 percent limitation. Their data will be included in the report as a footnote entry.
- "Funds made available" will be depot maintenance and repair obligations (or for future years, projected obligations) expressed in then year dollars.
- Amounts will be reported in millions (\$M) and will be rounded to the first decimal place (e.g., \$6,837.1).

- Reporting will be made to OSD by the respective Military Service or Defense Agency from the *Principal's perspective* (i.e., the component which manages the funding for, or owns the equipment that is being repaired or maintained).
  - For TRANSCOM depot maintenance and repair, the following convention will be utilized: (1) Air Mobility Command will be reported by the Air Force, (2) Military Sealift Command will be reported by the Navy, and (3) Military Traffic Management Command will be reported by the Army.
  - TRICARE Management Activity will report depot maintenance and repair for C-9A aircraft that it manages for the Defense Health Program through Fiscal Year 2000. The Air Force will report thereafter, based on a Program Decision Memorandum change of responsibility.
  - Depot maintenance and repair for Reserve and National Guard Components will be reported by their respective Services.
  - Military Services will report depot maintenance and repair of USSOCOM requirements when the Service is responsible for support with funds appropriated to the Military Service. USSOCOM depot maintenance and repair that is funded by Defense-wide appropriations to USSOCOM will be reported separately by USSOCOM.
  - Military Services will report depot maintenance and repair for National Foreign Intelligence Program requirements when the Service is responsible for management of funds. The appropriate Defense Agency will report depot maintenance and repair for requirements that are directly managed.
  - Special access program requirements for depot maintenance and repair should be included in totals reported.
  - Military Services will report depot maintenance and repair for Defense Security Cooperation when the Service has been appropriated the funds for support. The Defense Security Cooperation Agency will report depot maintenance and repair for requirements when it has been appropriated the funds for support. Depot maintenance and repair funded through Foreign Military Sales or with funds from "Country Trust Fund Accounts" will not be reported.
  - Defense Agency depot maintenance and repair funded by appropriations or working capital fund obligation authority to that Defense Agency will be separately reported by the Defense Agency.
- For depot-level repairables (DLRs), the Principal is the defense activity initiating or directing the repair requirement. In particular, for DLRs managed under Nonconsumable Item Management Support Code (NIMSC) 5 procedures, the Principal will be the Primary Inventory Control Activity (PICA) Military Service. As a result:
  - A NIMSC 5 return of an unserviceable DLR from one defense activity to another Military Service's PICA is not counted, since the transaction is supply-to-supply and the demand may be satisfied by new procurement or may not generate a repair action.
  - When (and if) the PICA does induct the DLR for repair, the PICA Military Service will be the reporting activity.

### General Guidelines

- The data call will report Fiscal Year 1999 and 2000 actual obligation data. The data call will also reflect projections for Fiscal Years 2001 through 2005 as follows: the funded FY 2001 and FY 2002 workloads in the submission for the Fiscal Year 2001 President's Budget (including any supplemental appropriations) and the funded workloads for Fiscal Year 2003 through 2005 reflected in each Military Department's or Defense Agency's most recent baseline.
- The data will be reported specifically in two categories: "contracted for performance by non-Federal Government personnel" and "performed by employees of the Department of Defense."
- All depot-level maintenance and repair work performed by employees of the Department of Defense will be reported regardless of the location where the work is performed. This includes depot maintenance workload accomplished at non-WCF depot maintenance facilities and depot maintenance workload accomplished at facilities primarily devoted to other than depot-level maintenance purposes. All maintenance and repair performed in DoD maintenance depots is considered depot-level maintenance. Do not include ammunition and other non-maintenance depot operations accomplished at Army depots or arsenals. Do not include non-maintenance operations accomplished at Naval Warfare and Naval Ordnance Centers.
- All depot-level maintenance and repair work contracted for performance by non-Federal Government personnel will be reported regardless of the location where the work is performed. This includes contracts accomplished by non-Federal Government personnel assigned to work on government owned and operated installations and government owned, contractor operated plants (e.g., Air Force Plant 42 and Navy ground support equipment GOCOs).
- To the extent that the detailed data is readily available, it is desirable that depot-level maintenance- and repair-related ICS and CLS funding be reported as called for specifically in existing/planned contracts. If it is not practical to determine the amount to be reported based on specific contract line items or other direct means, Military Services and Defense Agencies may establish algorithms or estimation formulas for determining the portion of ICS, CLS, or any similar support contracts that is for the performance of depot maintenance and repair services. In those cases where other than actual data is reported, the reporting Military Service or Defense Agency shall maintain records that describe and explain any algorithms or estimation formulas used.
- ICS, CLS and other similar contractor support (e.g., flexible sustainment, total system performance responsibility, performance based support, direct vendor delivery support), to the extent that such support is for performance of depot maintenance services, will be reported in the "contracted for performance by non-Federal Government personnel" workload total. The reporting Military Service or Defense Agency shall maintain records on the amount of ICS, CLS and other similar contractor support included in the workload total.
- Depot-level software support will be included in the respective "contracted for performance by non-Federal Government personnel" and "performed by employees of the Department of Defense" workload totals. The reporting Military Service or Defense Agency shall maintain records on the amount of depot-level software support included in each workload total.
- *Contracts for depot maintenance and repair and/or depot-level software support accomplished by non-Federal Government personnel assigned to work on government owned and operated installations* shall be accounted for as "contracted for performance by non-Federal Government personnel" workload. Any contractor direct labor augmentation of organic production will be reported as contract only to the extent of actual contract costs. The reporting Military Service or Defense Agency shall maintain records on the amount of workload accomplished by non-Federal Government personnel assigned to work on government owned and operated installations.
- Sales of articles and services by DoD maintenance depots to entities outside the Department of Defense, when the work is accomplished by employees of the Department of Defense, shall be reported as work "performed by employees of the Department of Defense."

- Warranties for depot maintenance and repair shall be accounted for as "contracted for performance by non-Federal Government personnel" workload, to the extent that the terms and conditions of a warranty specify the performance of depot maintenance services. Warranty support, which occurs prior to initial operating capability, shall not be counted as depot maintenance and repair. Warranty support, which is contracted for prior to initial operating capability, but occurs after initial operating capability shall be counted as depot maintenance and repair.
- Military Services and Defense Agencies shall establish measures to ensure correct accounting of interservice workloads (that work performed by one component for another). These measures shall ensure that reporting is from the Principal's perspective (i.e., the component which manages the funding for, or owns the equipment that is being repaired or maintained) and that there is no duplicate reporting.
- Military Services shall issue guidance, as necessary, concerning consolidation of depot and non-depot work at individual locations.
- Military Services and Defense Agencies shall issue guidance, as necessary, to ensure estimates for future year workloads accurately reflect, to the extent practical, the projected depot maintenance and repair costs and public-private sector allocations for new and upgraded systems.
- Military Services and Defense Agencies shall establish and document internal operating procedures for collecting data and reporting public and private sector depot-level workload distribution. The procedures should clearly identify the specific commands and activities responsible for submitting data and describe the records and systems from which documentation will be pulled and the minimum documentation to be retained for follow-up. Procedures should also require monitoring of the implementation, and facilitate timely and accurate collection of data. Military Services and Defense Agencies shall maintain the detailed supporting data used to develop the submission for use by the General Accounting Office (GAO). The GAO is required to audit the annual report and express its opinion on whether DoD has complied with reporting requirements (10 USC 2466(e)(3), revised October 5, 1999).
- Military Services and Defense Agencies shall take measures to ensure reporting requirements are adequately communicated to all organizational levels responsible for providing workload-reporting data.
- Submitters of data should consider obtaining the assistance of appropriate support, such as Service audit agencies, to verify workload-reporting data before the data is submitted to OSD.

**Suspense Date:** Fiscal year 20XX and 20XX (actual data) shall be submitted to OSD by January 4 annually. Fiscal year 20XX through 20XX data shall be submitted to OSD by March 2nd annually (see page 94).

### **Definitions**

**Software Maintenance.** Those activities after initial operating capability (IOC) necessary to (1) correct errors in the software; (2) add incremental capability improvements (or delete unneeded features) through software changes; and (3) adapt software to retain compatibility with hardware or with other systems with which the software interfaces. For purposes of this reporting requirement, only depot-level software maintenance will be reported. Depot-level software maintenance consists of changes made to operational software resident in military materiel (e.g., weapon systems and their components, space control systems and their components, and their associated automated test equipment and test program sets). Depot-level software maintenance will be reported regardless of location or funding source.

## Interim Contractor Support (ICS)/Contractor Logistics Support (CLS).

### ICS

ICS is designed to be an interim support arrangement as a part of the acquisition strategy for new systems. As a matter of policy, the portion of ICS that occurs prior to IOC shall not be counted as depot maintenance, since it is associated with RDT&E and the initial production effort that typically occurs concurrent with final system development.

ICS, which occurs after IOC, shall be separated to identify that portion of off-equipment maintenance that occurs in support of operational systems. That off-equipment portion accomplished in support of operational systems shall be counted as a part of contract depot maintenance. If the ICS contract includes "heavy" or depot-equivalent maintenance tasks for the weapon systems themselves, that portion shall also be counted as contract depot maintenance.

### CLS

CLS is designed to be a lifetime support concept, often for commercial or commercial-derivative systems which have at least a portion of their logistics support provided by commercial standard processes.

The off-equipment maintenance portion of CLS for operational systems shall be counted as a part of contract depot maintenance. In addition, "heavy" or depot-equivalent maintenance tasks for the system itself shall also be counted as contract depot maintenance.

### ICS/CLS

To the extent feasible, ICS and CLS contract depot maintenance costs should exclude shipping, handling, management, engineering, storage or issue expenses, and should not include on-equipment tasks performed on the system in an operational setting.

Contracts that do not break out on-and-off-equipment tasks should include the full expense in the contract depot maintenance computation unless there is a specific rationale for making a pro-ration. When pro-rata assumptions are employed, the Military Services must capture the rationale for further reference.

ICS and CLS includes software maintenance support to the extent that it is consistent with the above software maintenance definition.

**APPENDIX D:**  
**DEPOT SOURCING AND EXPENDITURE REPORT**

MARCORMATCOM receives the DSER report from MARCORLOGBASES and MARCORSYSCOM by the 7th of the month following the end of each quarter (e.g., due 15 July for 3rd quarter) in the format provided below:

DEPOT SOURCING AND EXPENDITURE REPORT (\$K)						
Quarter _____						
As of _____						
A TAMCN	B Nomenclature	C # of Units for Quarter	D Contractor Name/ Organic Depot	E Dollars Expended FY _____	F Remainder FY _____ Projected (\$)	G Total Program (\$)
Note: Column G minus column E equals Column F (Except for 4 <sup>th</sup> Qtr then, E equals G and F equals zero).						
This is a cumulative report. For example, at the end of the 2nd quarter, 1st quarters data is added to 2nd quarters data; thereby reflecting total dollars expended through 2nd quarter.						
If applicable, complete the following:						
1. A decision has been made to transfer depot maintenance for the _____ (TAMCN/Nomenclature) from (government /non-government to (government/non-government) beginning _____. Expected dollar value for depot maintenance for the first full quarter once the change has been made, is _____ (\$K).						

DEPOT SOURCING AND EXPENDITURE REPORT OUTYEAR DATA (\$K)						
FY*	TAMCN	Nomenclature	# of Units	Contractor Name/Organic Depot	Total Program (\$)	
* Outyear data includes five years beyond the year of execution (use one line per year)						
FY ____						
(List all TAMCNs)						
FY ____						
(List all TAMCNs)						
Etc.						

MARCORMATCOM utilizes the data received in the DSER Report to complete DOD's reporting requirement format identified below:

TAMCN	NOMENCLATURE	PERFORMER	ORGANIC			COMMERCIAL		
			TOT QTY	\$\$ EXPENDED YR TO DATE	\$\$ PROJECTED	TOT QTY	\$\$ EXPENDED YR TO DATE	\$\$ PROJECTED BAL OF YR
(LIST ALL WORKLOAD)								



**APPENDIX E:**  
**COST ACCOUNTING AND PRODUCTION REPORT (1397)**

## MARINE CORPS DEPOT MAINTENANCE

FY \_\_\_\_\_

### Summary of Depot Maintenance Production and Cost Report (1397)

This report is due to DC, I&L by the 7th of December annually. The report reflects cumulative fiscal year to date information for closed/completed work and active work-in-process. The cost reflected can span a period of years not only what was executed in the reporting year. For example, in December of 2001, FY 2000 workload should be reflected in this report. There are two parts to this report. A summary overview and hard copy reports produced from files sent to Defense Manpower Data Center (DMDC).

### **OVERVIEW**

➤ State whether or not the report is in compliance or non-compliance with DoD 7000.14-R, Financial Management Regulation, Volume 6, Chapter 14.

### **CONTRACTED DEPOT MAINTENANCE**

➤ Discuss in this section cumulative completed work and cumulative work in process. The work reflected in this report can span a period of years. The costs reported on job orders shall be cumulative since inception until the job is finally completed.

### **ORGANIC DEPOT MAINTENANCE**

➤ Discuss in detail the mission of our Maintenance Centers and the type of work accomplished.

➤ Three tables are included in this section. Table 1 reflects MC3, Albany GA workload, Table 2 reflects MC3, Barstow CA workload, and Table 3 should be the sum of Tables 1 and 2. The following format is provided:

**Marine Corps Maintenance Activity, \_\_\_\_\_**  
**(\$000)**

<b>A WSSC</b>	<b>B FY __ Completed</b>	<b>C FY __ Total (with WIP)</b>	<b>D FY _ Completed (w/o WIP)</b>	<b>E Variance</b>	<b>F %</b>
Aircraft					
Automotive					
Combat Vehicles					
Construction Equip					
Comm/Elec					
Missiles					
Ships					
Ordnance					
General Purpose					
Other					
<b>TOTAL</b>					

Table 1

Column A reflects weapon system support code structure. Column B reflects the data that was submitted to DoD for the year prior. For example, in December of 2000, FY 1999 data would be reflected in Column A. Column's C and D would reflect FY 2000 data. Column E reflects the difference between Columns C and D. Column of reflect the percentage of change in workload from Columns B and D.

**TOTAL DIRECT LABOR HOURS  
TOTAL COSTS**

The Sections on Total Direct Labor Hours and Total Costs should discuss workload fluctuations from year to year and the impact to cost.

The remaining report contains a section for each WSSC identified in the chart above (Table 1). Each section should justify variances from year to year (FY 2000 compared to FY 1999). The last section of the overview includes a summary addressing workload comparisons between commodity groups.

The second part of this report includes the following eight tables produced from DMDC and these reports reflect completed workload only:

1. Marine Corps Depot Maintenance FY 20\_\_ Summary of Depot Maintenance Production Reporting
2. Marine Corps FY \_\_ Total Depot Maintenance Cost
3. Marine Corps FY \_\_ Total Production Cost
4. Marine Corps FY \_\_ Organic Depot Maintenance Activities Facility Production Report
5. Marine Corps FY \_\_ Depot Maintenance Production Organic Facility Performance Statistics
6. Marine Corps FY \_\_ Depot Maintenance Production Cost by Facility and Commodity Group
7. Marine Corps FY \_\_ Depot Maintenance Production Weapon System Costs
8. Marine Corps FY \_\_ Total Cost by Weapon System and Work Breakdown Structure